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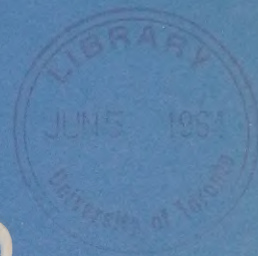
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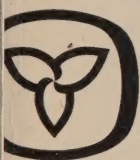
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# ONTARIO ECONOMIC REVIEW

Chart

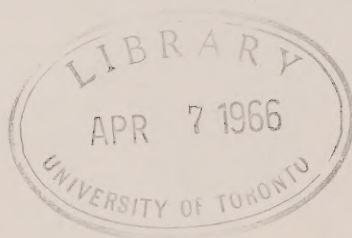


DEPARTMENT OF ECONOMICS AND DEVELOPMENT

MAY 1964 - APR. 1965  
VOL. 2  
NO. 1

Hon. S. J. Randall, Minister

Stuart W. Clarkson, Deputy Minister



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# THE ONTARIO ECONOMY

High levels of industrial production, construction, services, retail sales and employment, have all contributed to the continuing upsurge in business activity in Ontario. In the United States, recent reports have also indicated that the gross national product, industrial production, personal income and corporate profits have all reached record highs, and that unemployment, which has been a persistent problem, is declining. In Canada a similar trend in the gross national product, industrial production and corporate profits is evident and new orders in manufacturing are on a steeply rising trend, indicating a high level of manufacturing production in the future.

## PRODUCTION

Ontario's productive activity has not only been stimulated by the favourable environment throughout North America but has, in no small way, contributed towards it. Increased production has been most noticeable in the textile, chemical, electrical, food, clothing, automobile and steel industries. The latter two represent a good portion of the heavy industrial output in Ontario.

Automobile production has been maintained at a steady high level in recent weeks and, on a cumulative basis, for the year so far, is about 23 per cent higher than in the corresponding period last year. Truck sales were also up and in April were close to the all-time record of April 1953. The decision of Mack Trucks to begin operations in Toronto in July is expected to do away with about \$16 million worth of annual imports.

Steel production continues at or near peak capacity, buoyed up by the high level of construction activity and the demands of consumer durables manufactures. For the first four months of the year steel production was about 13 per cent higher than in the corresponding period last year.

Mining production is showing mixed trends. The new mineral discoveries north of Timmins promise considerable activity in copper, zinc and silver. At the same time there is stepped-up production at the International Nickel Co. of Canada in Sudbury. Gold output, on the other hand, continues to decline, with total production in the province for the first three months of the year about five per cent below the corresponding period last year. The official announcement that the Federal Government will discontinue stockpiling uranium after June 30 also leaves uranium prospects for the near future rather cloudy.

Pulp and paper production in the province has been maintained at a reasonable level but increased activity in the industry for all of Canada was more marked in Quebec, and the Western provinces than in Ontario.

The outlook for production of heavy electrical equip-

ment has been enhanced by a recent order from the Hamilton Falls Power Corp. for \$50 million worth of turbines, generators and related equipment for its proposed power project in Labrador. The work is expected to be undertaken by the Canadian General Electric Co., the John Inglis Co. Ltd., the English Electric Co. Ltd. and Dominion Engineering Works Ltd. Defense contracts announced recently included a \$4.5 million order to Litton Systems (Canada) Ltd., for aircraft ground systems; a \$1.3 million order to Canadian Marconi Co. Ltd., for electronic equipment and a \$1.3 million contract to Pyrene Manufacturing Co. of Canada Ltd., for crash trucks. A contract for engineering services involved in the design and construction of the Mactaguac hydro-electric development on the St. John River in New Brunswick was also given to H. G. Acres and Co. Ltd., of Niagara Falls.

## CONSTRUCTION

The current high level of business activity has also encouraged many new expansion programs. For the first four months construction contract awards in the province were more than 25 per cent higher than in the same four months last year and in April, were 97 per cent higher than a year earlier. Total housing contracts in the province for April, which were expected to show weakening with the termination of the winter bonus plan, rose sharply in April after a March decline.

Business, industrial and engineering contracts, which have been exhibiting a downward trend since January, also turned up very sharply in April to reach a record high.

Among the larger construction operations currently under way are Dominion Electrohome Industries Ltd.'s start on its \$6.5 million plant at Kitchener, a \$7 million expansion by Canada Starch Co. Ltd. at Cardinal, a \$1 million three-storey expansion to the "Fabrikoid" division plant at Toronto for Canadian Industries Ltd. and a \$2 million expansion by Hayes Steel Products Ltd. at Thorold. Davidson Rubber of Canada will spend more than \$1 million for a 105,000 square-foot manufacturing plant and equipment in the industrial park at Orangeville, Ontario, with Mollenhauer Contracting Co. Ltd. of Toronto as the builder. The Eastern Construction Co. is low bidder and probable contractor for a \$2.6 million shopping plaza complex in North Toronto for Steinberg's Ltd. Construction will start this summer on a \$3.5 million needle-trades building in downtown Toronto calling for six manufacturing floors above a restaurant, bank and parking facilities.

Smith-Corona Marchant Incorporated will be constructing a 28,000 square-foot plant and sales office in Don Mills, Toronto. Construction has started on West-



minster Park, an integrated residential and industrial community near London, Ontario, to be owned by Clark-side Corp. Ltd. Still in the planning stage is a \$1 million plant at Guelph for Onark Industries Ltd. Also at its initial stage is a proposal by Gedilla Developments Association of Toronto to build a \$7 million apartment complex just north of Danforth Avenue overlooking the Don Valley Parkway in Toronto. Starting soon is construction on a \$1.4 million medical building in North Toronto.

In the institutional field, Ellis-Don Ltd., of London, Ontario has been awarded the 3.1 million contract for construction of the new Ontario College of Education at London. Initially, this institution will cater to about 600 students. The Ontario Department of Public Works has granted a \$4.2 million contract to Redfern Construction Ltd., Toronto to build a seven-storey addition to the provincial treasury building. The Cooper Construction Co. Ltd. of Hamilton has won the \$1.6 million humanities and social science building for McMaster University in Hamilton. A new \$1 million Y.M.C.A. building will also be started at Sault Ste. Marie.

Of great significance to Port Weller, is the intended immediate start on the construction of a sister ship of the Cape Breton Miner. Cost of the new vessel has not been disclosed but the slightly smaller Cape Breton Miner cost \$10 million.

#### EMPLOYMENT AND INCOME

The Canadian employment picture continues to be the best since 1957. Ontario has the lowest unemployment rate at 2.9 per cent for April, seasonally adjusted. Though the rate in March was 2.5 per cent, this was unusually low and could be attributed in part to above average construction activity in warm weather. The number of applicants registered for employment at the various Ontario NES offices is down 11 per cent from last April. Even the federally designated depressed areas of Windsor and Brantford are well on their way to recovery and the new ore discoveries in Timmins will stimulate employment in that area.

Generally the construction, manufacturing, wholesale and retail sectors are short of trained people whereas bush activities and mining indicate slight declining labour demand. Specifically in manufacturing, several industries are short of experienced personnel. Dairies and cheese factories are recalling workers, leather manufacturers are short of skilled workers and the textile firms can use more power machine operators. In the iron and steel industries, plant capacity is proving more of a limitation than shortage of labour. In the durables industries there exist critical shortages of tool and die makers, machinists and metal pattern makers. The electrical apparatus and supplies industry is also experiencing a short labour supply particularly in the Toronto and Peterborough area. Considerable female hirings were prevalent in this field last month.

Average weekly wage rates have also been rising sharply in Ontario particularly in Oshawa, Sarnia, and Sault Ste. Marie. During the 1960's Ontario, next to British Columbia, has experienced the largest wage increases in the country. The trend in total labour income in the province has consequently been steadily rising. In February, an all-time high was reached (on a seasonally adjusted basis).

#### SALES

Retail sales, buoyed by general prosperity and rising income have remained high, although in March there appeared to be some softening. In three major areas, grocery and combination stores, motor vehicles, and furniture, appliance and radio sales there were distinct declines from previous peaks. Nevertheless for the first quarter, total sales were about eight per cent higher than in the same period last year. Sales of chain stores for all of Canada, which are fairly representative in Ontario, advanced 10.9 per cent in the first quarter of this year over the same period last year, but in March were only 3.3 per cent ahead of March last year indicating some deceleration in this area also.

Consumers were getting less for their money again in March as the cost-of-living index rose to a record high on April 1, as a result of higher prices for food and clothing.

#### FINANCE

Money market conditions remained relatively stable throughout April, apart from a temporary period in the last few days of the month when some financial and commercial borrowers experienced difficulties in obtaining their short-term money requirements. This situation was mainly the outcome of the impending delivery of a Government of Canada refunding issue.

The highlight of Canadian bond market activity was the \$400 million Government of Canada issue announced on April 13, to refund a \$350 million issue due May 1. The new issue comprised four maturities ranging from 14 months to 26 years. The excellent reception accorded the new offers did much to stabilize otherwise dull bond markets, and prices of most outstanding issues closed the month with fractional price improvements. New Canadian bond financing for the first four months of 1964 totalled \$1.22 billion, a decrease of 13.8 per cent from the \$1.42 billion raised in the same period last year.

On Friday, April 24, the Report of the Royal Commission on Banking and Finance was publically released. The central theme of this 566 page report is that a creative and flexible financial system will best serve the country's changing needs.

"A creative financial system is one which does not just passively accommodate the usual — instead it is one in which active and inventive efforts are constantly being made to meet the sound requirements of lenders and borrowers, regardless of how untried and un-



usual such needs may be. A spirit of vigorous, restless innovation in the financial system — of devising new ways to do new things rather than of justifying why they should never be done at all — can ordinarily best be achieved in conditions under which the participants are not prevented from responding to changed opportunities, in which price and other competition is too intensive to be comfortable, in which there is relative ease of entry for honest men with ideas and imagination, and in which different classes of institution can compete with each other on an equitable and open basis.” (pp. 8-9)

The initial reaction on the part of the business and investment community to its contents appears to be guarded approval though some specific criticisms have been expressed regarding certain of the multiplicity of recommendations contained therein. This is a document which requires considerable digestion before true evaluation of the effects of adopting and implementing any of its recommendations can be made.

The trend towards higher equity prices in most industrial sectors of the Canadian stock markets was maintained throughout April. Despite this bullish sentiment, the volume of daily trading subsided to more representative intensities following the previous month's hectic sessions. The Toronto Stock Exchange Industrial Index advanced to new all-time closing highs on numerous occasions, the latest of which was reached on April 22nd, when it achieved the level of 152.28. This Index closed the month at a level of 151.09, up 5.74 points on Index over the month.

Canada's foreign exchange reserves increased by \$15.6 million during April to close the month at a level of \$2,481.1 million. This is the first month-to-month increase since November 1963.

The Canadian dollar remained relatively constant in terms of the United States dollar with fluctuations limited to a range of one-eighth of a cent.

#### FOREIGN TRADE

Export sales continued high in March, about 20 per cent higher than a year earlier. For the first three months of this year exports were 20 per cent higher than in the first quarter of last year and manufacturing exports alone were 41 per cent higher than in the same period last year. Two recent export contracts for companies in Ontario included the packaging of Studebaker's automotive parts for plants in Australia, Belgium, Israel, South Africa, Chile, and New Zealand by Summerhayes Industrial and Wood Products Ltd., of Brantford; and the manufacture of stereo radio-phonographs for Wurlitzer Co. of De Kalb, Illinois, by Clairtone Sound Corp. Ltd., of Toronto.

#### CONCLUSION

The high level of production and construction activity in the province at the present time is engendering a confident business environment. Employment is maintained at a high level, profits are expanding and new orders in manufacturing are rising sharply. Retail sales, although still high, have shown some tendency to retreat from recent peaks and may bear watching.

## ONTARIO LABOUR MARKETS 1953 – 1963

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#### ONTARIO DEPARTMENT OF ECONOMICS AND DEVELOPMENT

Employment in Canada has always been subject to tremendous variations in demand, thus producing sharp changes in the market for labour. The purpose of this article is to summarize the nature of these changes. In Ontario, because of the greater variety of industry and the broader employment base in this province as compared with other provinces, fluctuations have not been so severe as they have been in the rest of the country. Nevertheless, the seasonal and cyclical patterns of activity are clearly evident in the demand for labour. The table below shows the ratio of unemployment to the total labour force for each year since 1946 at the period of lowest employment, the period of highest employment and the average for the year. This will give some indication of the magnitude of seasonal and cyclical variations in the Ontario labour market during the past 18 years.

#### UNEMPLOYMENT AS A PROPORTION OF THE TOTAL LABOUR FORCE, ONTARIO, 1946-1963

	<u>Peak</u>	<u>Trough</u>	<u>Average</u>
1946	4.0	2.3	2.8
1947	2.8	1.3	1.7
1948	2.7	1.2	1.7
1949	3.4	1.6	2.3
1950	4.7	1.4	2.4
1951	2.3	1.2	1.7
1952	3.7	1.4	2.1
1953	3.0	1.3	2.1
1954	5.0	3.0	3.8
1955	5.7	1.9	3.2
1956	4.3	1.5	2.4
1957	4.1	2.4	3.4
1958	7.6	3.9	5.4
1959	6.9	2.8	4.5
1960	6.5	4.1	5.4
1961	8.6	3.5	5.5
1962	6.8	2.8	4.3
1963	5.8	2.3	3.8

The table also serves as a general indicator of the overall level of economic activity in the Province. Because people do not move freely from one area to another, or from one occupation to another, there could be and often are great variations in the employment situation in different geographical areas within the province at any one time. Most localities are affected to a greater or lesser extent by cyclical variations in the economy, but in individual areas indigenous factors may have a greater effect on the labour supply and demand than does the general level of the economy. The total labour market is, in effect, a series of inter-connecting markets.

In order to facilitate comparison of these heterogeneous labour markets, the Department of Labour in Ottawa has established criteria for their classification. These classifications are designed to provide more useful information about the labour situation across the country to both employers and to people seeking work. The boundaries for the local labour market areas are basically the administrative areas covered by the National Employment Service offices. In some areas, these units are grouped together because of the ease with which people can move from one locality to another. Thus all of Metro Toronto, including New Toronto is included as one labour market. Likewise, the Niagara Peninsula is considered a single labour market because people can live almost any place in the Peninsula and easily reach a job in any other centre in the area.

The relative demand for supply of labour is used as the basis for the labour market classification. A detailed explanation of the method of classification can be found in the June 1963, Labour Gazette, page 491. The method, in brief, is to measure the ratio of job applicants at the National Employment Service office in relation to the total pool of wage and salary workers in the area. Category one, substantial labour surplus, indicates that in excess of 10, 12, or 14 per cent of all paid workers in the area are unemployed, depending on the size and character of the area. Moreover, in this category nearly all types of labour would be in excess supply. For the moderate labour surplus category, about half of the major occupations have an excess of supply over demand for labour. This situation usually exists when registrations for employment amount to 5.9 or 6.9 per cent of total paid workers, but less than the 10, 12, or 14 per cent which categorizes substantial surplus.

Areas are considered in balanced labour supply when most of the major occupations have an approximate balance of labour supply and demand. This balance is defined as the situation when the registrations on file at the National Employment Service offices are more than 1.9 or 2.4 per cent and less than 6 or 7 per cent of paid workers, depending on the size and character of the area. When there are fewer than 2 or 2.5 per cent of the

total paid workers looking for jobs at any one time the area usually has a shortage of workers.

The chart inserted in this publication shows the labour market classifications for Ontario for the period from January 1953 to January 1964. All classifications are for the end of the month. While the Department of Labour has been publishing this data for a number of years its significance has increased tremendously within the past few months as these categories have become the basis for designating areas which are eligible for special tax incentives to industry.

The chart shows classifications for only those areas which are in the regular publication list of the Department of Labour. Some of the smaller areas which are now classed as designated areas are not included in our chart. The published data does not give classifications for Wallaceburg or Elliot Lake which were designated for Federal assistance in the autumn of 1963. Timmins, which was also included among the designated areas, is grouped with Kirkland Lake for purposes of classification in the Labour Gazette. There are also a number of areas which have had labour surpluses for most of the period under review, and which are not classified as designated areas. These areas have had fairly rapid industrial employment increases, and their problem has been a larger growth in the labour force than in employment rather than one of very little growth or absolute decline in employment.

The major changes in employment are clearly reflected in the local labour market classifications. During the years 1953 to 1957 there was a fairly tight labour market in the province; the proportion of the labour force unemployed averaged about three per cent over the five year period and fluctuated from a summer low in 1953 of 1.3 per cent to a winter high of 5.7 per cent in 1955. During this period the chart shows that most areas had balanced labour markets for the greater part of the period and a fairly large number had shortages of labour for short periods. There were some surpluses in a number of areas during the winters of 1953/54 and 1954/55 but the summers produced balanced labour markets or shortages.

In 1956, the year with the tightest labour market in this eleven year period, there were labour shortages in a substantial number of areas in Ontario. These included some mining areas, some areas of northern Ontario where a pipeline development or other major development programs were being undertaken, as well as a wide strip through mid-western Ontario including the Kitchener, Galt, Listowel, St. Thomas, Woodstock, Tillsonburg and Simcoe local areas. At the same time, Ottawa also had labour shortages, as a result of the vast expansion in government services and the building required for government buildings and housing in that area.



Even during these years of relative prosperity there were some areas with surplus workers during a large part of the year. Among these were Windsor, Brantford, Cornwall, Pembroke, North Bay and Owen Sound. The poor employment situation in most of these areas was the result of a slow down or reduction in operation of a major industry in the town. For example, the movement of the Ford operations from Windsor to Oakville and the general reduction in auto production in Windsor affected that area. Brantford was suffering from a slowdown in activity in the farm machinery industry and in textiles. Cornwall had a fairly booming economy because of the seaway construction but had much larger numbers of people coming to the area looking for employment than there were jobs available.

By 1957 some of the major investment programs which had been requiring large numbers of workers were completed. In addition, we had the largest immigration during 1956 and 1957 that we had seen since the 1910-13 period. As a result of these forces, surpluses began to appear in the labour markets in 1958 and from then until 1963 there were substantial surpluses of labour throughout many of the areas of Ontario, particularly during the winter months. This situation reached its most severe stage in 1961. There has been some improvement in the employment situation since then. The number of areas with labour surpluses during the period 1958 to 1963 and the length of time that those surpluses continued indicate a general over-supply of labour during the period. This is confirmed by the over-all unemployment data. The ratio of unemployment to the labour force averaged 6.8 per cent from 1958 to 1963 and fluctuated between a low of 2.3 and a high of 8.6.

At the present time economic activity seems to be expanding faster than the increase in the labour force and the labour supply and demand patterns have moved into balance. The year 1964 promises to be a far better year for employment opportunities than we have seen for some time. Only three areas — Cornwall, Fort William-Port Arthur, and Bracebridge had substantial surpluses of labour for all of the first quarter of this year. Pembroke, Sault Ste. Marie, Lindsay and the Niagara Peninsula each moved into the substantial surplus category for at least one month during the past winter, but for the first time since 1957 the year began with some balanced labour markets. It is probable, in fact almost inevitable, that there will again be some areas with fairly severe labour shortages this year. The overall supply is not yet too restricted, but shortages of certain essential skill categories have already begun to affect industry.

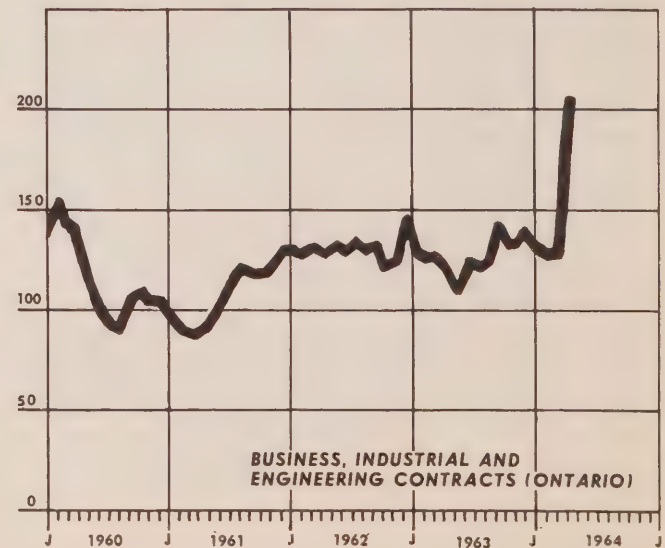
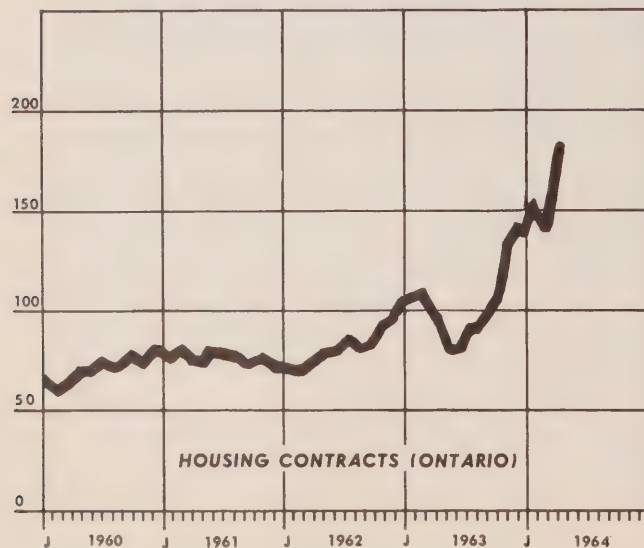
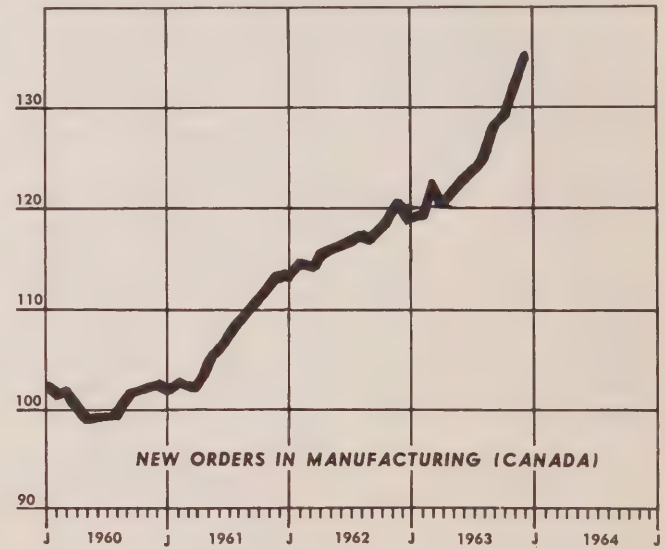
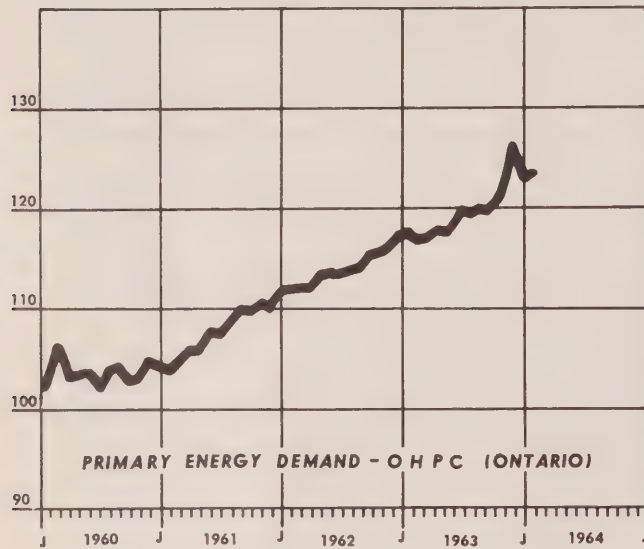
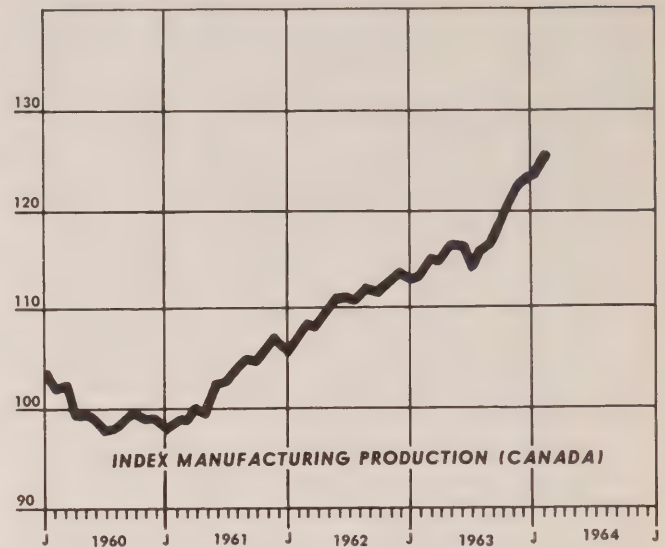
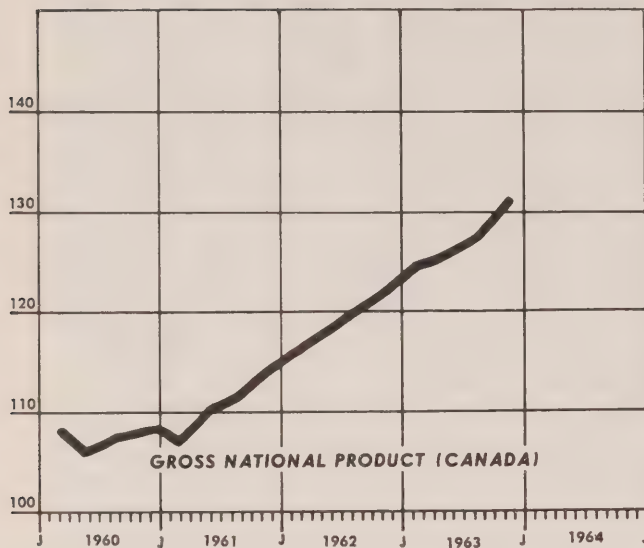
The comparison of over-all unemployment levels with the local labour market classifications show a high cor-

relation. Such a correlation could be the result of mobility in the labour force and the population or it could be because the growth factors which affect one area tend to affect nearly all areas. The latter reason is probably the strongest factor in bringing about the consistency in the trends. However, existence of substantial labour surpluses in specific localities at the same time that other localities and industries are short of labour indicates that there is a general stickiness in the movement of labour. The inter-connection of the markets may or may not be a force in attaining equilibrium depending on distance, transportation facilities, cost of moving, similarity of industry, and comparability of wage scales in the alternative markets.

The most stable area and the one with the nearest balanced labour market for the entire period under review is a strip through the southern part of the province which runs north from Lake Erie. It includes most of Elgin, Norfolk, Middlesex, Oxford, Perth, Waterloo and Wellington counties. This area has widely diversified manufacturing industry, a prosperous agricultural industry, and a fair number of average or middle-sized commercial and industrial centres. Most of the cities in the area have been growing at a rapid rate, but this area is still not growing as quickly as certain other parts of the province such as the Metropolitan region and the Ottawa area. Growth in population and industrial growth have been fairly well matched in this particular part of the province. At the same time some of the more rapidly industrializing areas have not been able to maintain full employment levels and have had far more trouble with adjustments of labour demand and supply.

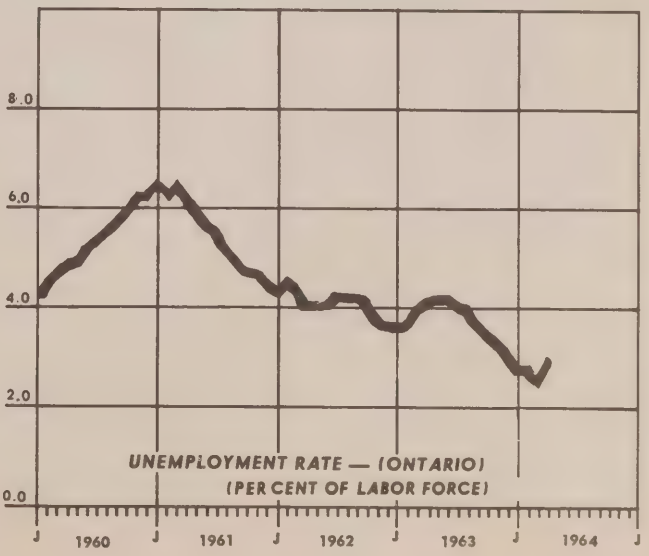
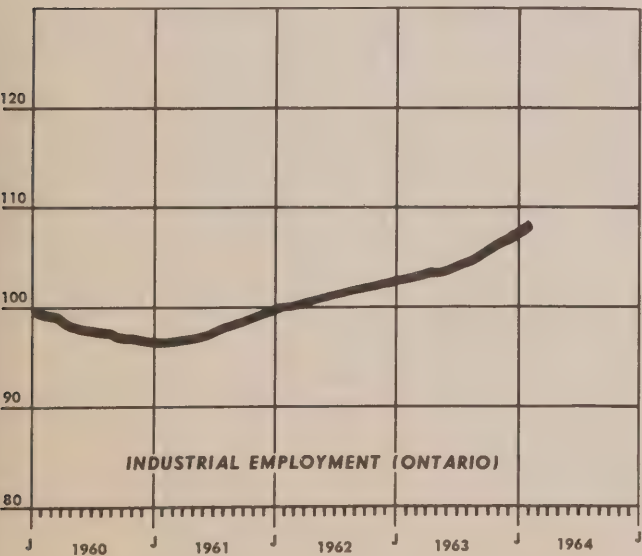
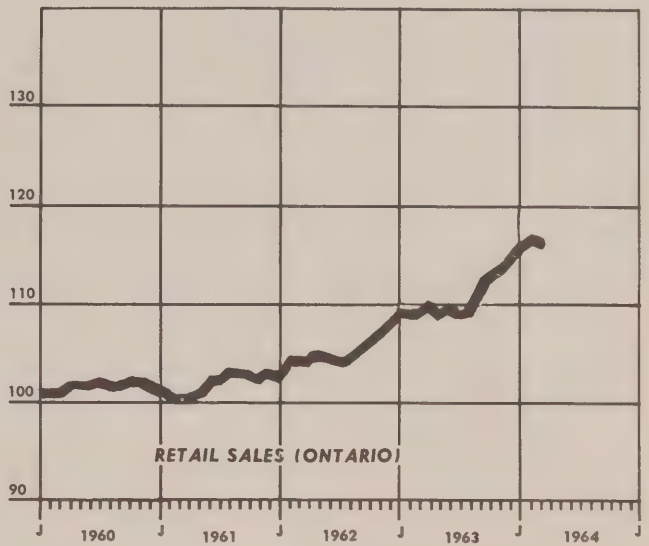
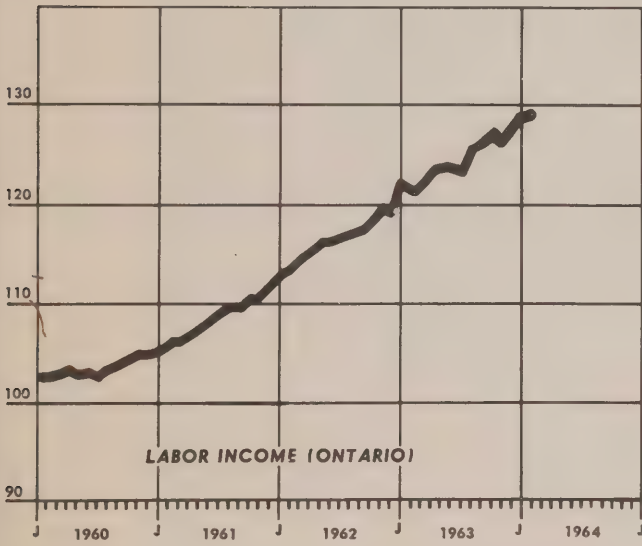
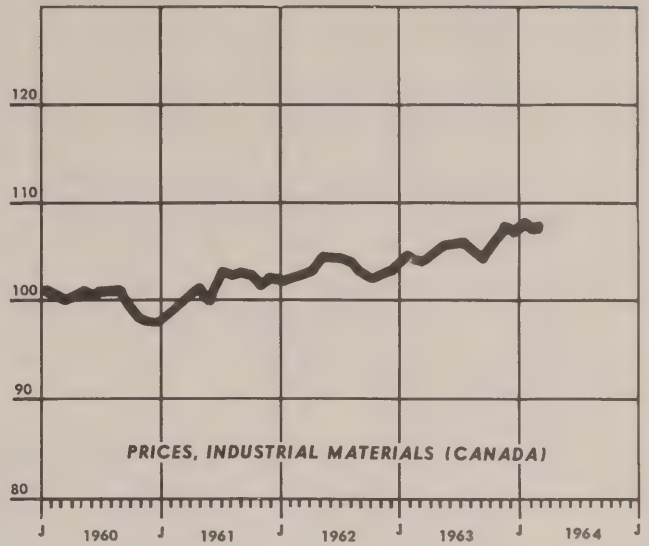
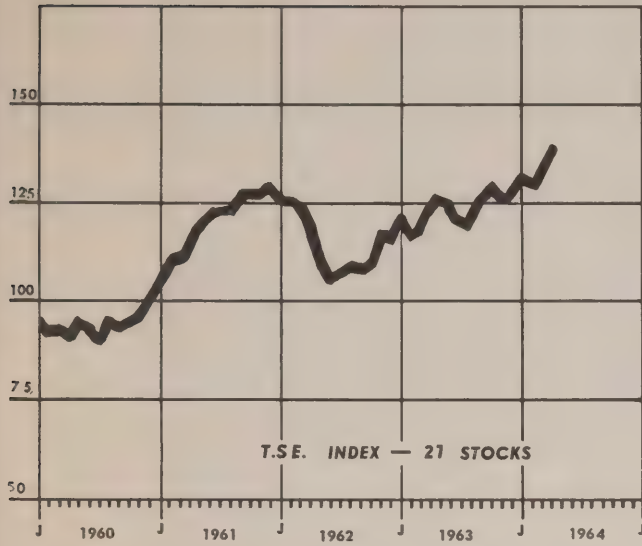
One factor which has not been taken into account in the classification of the labour markets in Canada is the seasonal variation in employment. This shows up very clearly in the chart as the surpluses appear mostly in the winter months and the balances and shortages appear in the summer. In spite of all the efforts which have been made in the last 8 to 10 years to increase winter employment in this country and to offset the effect of our climatic and social customs which create seasonal variations in demand, there does not seem to have been any marked reduction in the fluctuations in Ontario labour markets. This conclusion may be tempered somewhat because the classifications are based on broad groupings and any improvement in the winter volume of work would have to be very great indeed to markedly influence these classifications. It will be interesting to watch this development in future years to see if there is a less definite break in the pattern between the winter and summer months as a result of the contra-seasonal techniques which have been adopted.

# ECONOMIC INDICATORS — SEASONALLY ADJUSTED 1959 = 100





# ECONOMIC INDICATORS — SEASONALLY ADJUSTED 1959 = 100



ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED

(\* Figures for Canada)

LEADING INDICATORS

	March	April	May	June	July	August	September	October	November	December	January	February	March	April
Average Weekly Hours Worked in											1964			
Manufacturing	41.1	41.0	40.9	40.9	40.8	40.7	40.9	40.9	41.1	41.2	41.5			
Business Failures - Number	85	88	89	92	96	94	92	95	93	89	82	72	61	
Business Failures - Liabilities	4,406	5,380	5,840	5,964	6,612	5,699	4,851	5,063	5,040	3,975	3,519	2,420	2,194	
New Orders in Manufacturing*	3,353	2,316	2,344	2,368	2,394	2,415	2,467	2,494	2,553	2,607				
T.S.E. Index - 77 Stocks	129.3	130.3	131.0	131.2	132.0	132.6	132.4	134.0	136.7	137.3	138.4	141.5	143.5	148.6
New Dwelling Unit Starts	3,584	3,692	4,073	4,164	4,090	4,069	4,005	4,271	4,522	4,777	5,354	4,899		
Housing Contracts	50.0	46.4	42.2	36.5	37.3	41.7	42.2	47.3	59.6	62.7	62.2	69.1	63.4	80.0
Business, Industrial and Engineering Contracts	80.1	77.4	69.1	78.5	77.5	80.1	90.6	84.6	84.8	88.2	82.4	79.9	79.7	130.3
Money Supply*	15,576	16,629	15,755	16,005	16,107	16,049	16,116	16,434	16,522	16,612	16,797	16,759		

COINCIDENTAL AND LAGGING INDICATORS

Gross National Product*	\$ Million	42,100												
Total Industrial Production*	1949=100	194.0	194.3	195.7	195.9	192.8	195.1	197.7	200.3	204.2	209.1	211.9		
Total Manufacturing		172.0	171.7	173.8	173.8	170.8	173.3	174.7	177.4	180.8	185.4	188.4		
Non-Durables		172.7	170.8	172.8	173.4	170.5	173.9	173.3	175.1	176.7	180.4	184.1		
Durables		171.1	172.8	174.9	174.3	171.2	172.6	176.5	180.1	185.5	191.3	193.3		
Mining		299.5	302.1	297.5	298.3	285.0	292.1	302.5	304.1	307.4	310.6	318.3		
Electric Power & Gas Utilities		351.3	356.2	358.7	361.5	373.9	366.2	373.1	376.6	403.7	391.2	392.3		
Cheques Cashied in Clearing Centres	\$ Million	3,137	3,200	3,197	3,192	3,211	3,218	3,222	3,261	3,311	3,504	3,763	603	
Retail Trade	\$ Million	566	570	566	570	569	569	573	583	587	602	605		
Labour Income	\$ Million	734	739	742	745	745	759	761	767	771	790	794		
Labour Force	000's	2,428	2,445	2,454	2,464	2,473	2,482	2,483	2,489	2,491	2,501	2,506	2,509	2,513
Employed	000's	2,339	2,347	2,353	2,364	2,374	2,383	2,392	2,402	2,408	2,430	2,437	2,446	2,440
Unemployed	000's	89	98	101	100	99	99	91	87	83	71	69	63	73
Unemployed as % of Labour Force	%	3.7	4.0	4.1	4.1	4.0	4.0	3.7	3.5	3.3	2.8	2.8	2.5	2.9
Industrial Employment	1949=100	125.6	125.9	125.9	126.1	126.6	127.0	127.6	128.5	129.2	130.7	131.5		
Average Hourly Earnings in Manufacturing	\$	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.06	2.08	2.09			
Primary Energy Demand - OUPC	BKWH	36.87	36.99	37.14	37.15	37.83	37.78	37.84	37.92	38.34	38.84	38.97	39.88	41.25
New Dwelling Unit Completions	(No.)	2,723	2,810	2,867	2,947	3,040	3,250	3,302	3,256	3,108	3,395	4,495		

ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED

Prices, Industrial Materials*	1935=39=100	250.3	252.1	254.8	254.9	255.3	251.4	251.0	254.9	258.8	259.5	258.6	257.1	
Domestic Exports*	\$ Million	487.7	514.2	647.9	515.7	592.8	543.2	586.9	624.7	670.4	619.0	534.2		
Imports for Consumption*	\$ Million	478.2	554.6	609.3	532.9	585.2	525.5	542.7	620.1	618.4	571.4	514.2		
Foreign Exchange Reserves*	\$ Million U.S.	2,600	2,671	2,712	2,692	2,501	2,471	2,568	2,581	2,631	2,582	2,542		

Note: Changes from previous month's figures are due to revised seasonal adjustments.



ONTARIO  
ECONOMIC  
REVIEW

DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. S. J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*

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# THE ONTARIO ECONOMY

High levels of production, employment and income are characteristic of the present economic activity in Ontario and Canada. The National Accounts show that the gain in final domestic demand in the first quarter of 1964 was 4.1% — the highest quarterly change since the second quarter of 1952. In the United States, the 40 month old expansion shows few signs of slowing down. In fact some steel plants normally closed in the summer will remain open this year.

## PRODUCTION

Industrial production is still operating at boom levels, particularly in the non-durable and durable sectors. The construction and automotive industries continue to provide impetus to manufacturing throughout the country. The production of commercial trucks was up 18% in the first five and a half months of 1964 compared with the same period in 1963. In June, cars were being produced at a rate of 15,000 units a week.

Steel ingot production was running slightly lower in the first two weeks in June than in May; but was a healthy 7% higher than early June levels last year. Shipments of uncoated, plain, round steel were up 10% in March 1964 from the same month last year. Pig iron production in May was up 6% from a year earlier and iron ore shipments on the Great Lakes totalled just over 9 million gross tons — up some 750,000 from May 1963. The increased activity in construction early this year was reflected in a high demand for cement, concrete blocks, bricks and pipes. Cement shipments rose more than 40% in the first quarter of 1964 over the same period last year.

Ontario had a substantial percentage increase in factory shipments at just above 16% for the first quarter. Gains were particularly large in the metal fabricating, machinery, automotive, food, beverage and forest products industries. For all Canada the average first quarter shipments were 10.4% above those of the first quarter of 1963.

Mining in Ontario is still showing mixed trends. In the Porcupine area, Delnite Mines Ltd. announced that it will be closing its gold mine in mid-August because of lack of ore. About 200 employees will be affected. The Consolidated Denison mine at Elliot Lake won the reallocated \$5 million Gunnar contract to supply uranium to Britain. Also on the bright side is the recent announcement by Texas Gulf that its estimate of the ore body near Timmins is about 55 million tons — double the original estimate.

Already the company has awarded a contract for a road to the site and the Ontario Northland Railway is considering a spur line. Texas Gulf intends to spend some \$25 million in developing the site.

In the engineering field, Calgary Power Ltd. has ordered a 270,000 horsepower hydro generator valued at \$1.3 million from Canadian Westinghouse Co. Ltd. of Hamilton. Imperial Oil Ltd. has awarded a \$3 million contract to Port Weller Dry Docks Ltd. for construction of a 9,500-ton coastal tanker for use along the east coast. Collingwood Shipyards will be building a 730-foot bulk freighter for Canada Steamship Lines.

## MARINE

Better weather led to a sharp increase in the amount of commercial fish landed in Ontario during the first quarter of 1964. Landings rose 66% to reach just over 5 million pounds. The catch from Lake Huron more than tripled. Lake shipping is being adversely affected by the extremely low level of the Great Lakes—the lowest in 103 years.

## CONSTRUCTION

A buoyant manufacturing economy has led many industrial concerns to plan new plants and plant expansions. Business, industrial and engineering contracts have risen for the third month in a row to a record of \$105 million in May. Only partially offsetting this was a 9% decline in housing contracts.

Among the larger construction projects underway are the Union Gas Company's 56-mile, \$8 million natural-gas pipeline from Dawn Township to London, Ontario, a \$6 million project of the Niagara International Centre involving a 500 foot tower and a 105,000 square foot exhibition hall in Niagara Falls, and the \$12 million Terminal Towers project in Hamilton. The first contract for construction of the \$13 million mill for Abitibi Power and Paper Ltd. at Smooth Rock Falls was placed with Taylor Woodrow Installations Ltd. The Dryden Paper Company Ltd. announced a \$5 million expansion program involving additional drying capacity and an 800-ton recovery furnace. In London, construction of a \$2 million brew-house for John Labatt Ltd. is scheduled for completion by next spring. Also in London is a \$3.3 million storm and sanitary sewer project just recently won by C.A. Pitts General Contractor Ltd. of Toronto, and a \$300,000 warehouse project for the Kellogg

Co. of Canada. The London City Council has approved a start on the 300-acre subdivision planned by Sherwood Forest Development Co.

In Hamilton, construction will begin immediately on a \$20 million rod mill for the Steel Co. of Canada Ltd., on a \$500,000 factory addition for the Otis Elevator Co. and on a 26,000 square foot spring-manufacturing plant for the Wallace Barnes Co. Ltd. In Windsor, the Kelsey Wheel Co. Ltd. announced a \$1.3 million expansion program and in Chatham, the International Harvester Co. will spend \$1.8 million to increase its truck works. In the chemical field Dow Chemical of Canada plans to build in Sarnia the largest ammonia plant in Eastern Canada. In the same city Imperial Oil plans to build a \$4 million plant to produce polyvinyl resins. The Ontario Department of Public Works awarded an \$838,000 contract to Len Arliss & Co. to build an abattoir at the Ontario Reformatory at Guelph.

Many new projects have been planned for the Toronto area, including the following: a country club at Woodbridge worth \$2.3 million to be built by Dalton Engineering & Construction Co., the \$2.1 million Moss Park Armoury with Inspiration Ltd. as general contractor, and a 140,000 square foot addition to existing facilities of Kimberly-Clark Canada Ltd. in Toronto. A \$2.9 million contract was awarded to Swansea Construction Ltd. for construction work on the Spadina Expressway and construction of a \$1.5 million flour mill for Maple Leaf Mills Ltd. will be started soon. Expropriation of slum property will start soon for the \$18 million Alexandra Park redevelopment in downtown Toronto, and in York Township, a 1,500 suite apartment development overlooking Eglinton Flats has been approved in principle.

#### LABOUR

With many students now seeking employment, the Ontario labour force totalled 2,530,000 in May on a seasonally adjusted basis. This is an increase of 85,000 over May 1963. Employment in the same period has increased even more — 95,000 — with a resulting decline in unemployment. Unemployment has been running at about 3 per cent of the labour force. The overall employment picture is healthy with shortages of skilled men still appearing in particular manufacturing industries. The number of applicants registered for employment with Ontario offices is down 11% this May compared with May last year.

In agriculture, spring seeding and transplanting led to increased recruitment in May. In the forest industry, activity has picked up result-

ing in shortages of powersaw men in many northern areas. Labour for peeling and tree planting is in approximate balance and in the sawmill sector the Ottawa Valley officers report that all seasonally laid off persons have been recalled. Mining employment is mixed. Extensive hiring took place in May for quarrying, sand and gravel pits.

The outlook in manufacturing is the same as last month — a shortage of skilled workers, and a recalling of seasonal help. The food and beverage sector is providing added employment particularly in the canning and soft drink industries. Because of the excellent demand by automobile producers, the production of tires is up some 10% to 15% over last year with employment expected to increase in the next few months. In textiles, the demand for sewing machine operators far exceeded the supply in May though production is expected to slow down as summer vacations approach. Furniture manufacturers and foundry owners are still experiencing shortages of skilled cabinet makers and trained moulders and coremakers. Chemical producers are recalling laid off employees and hiring female workers for filling and packaging operations. In retail trade, experienced sales people are in demand in most centres. Students are being hired for weekends and peak evenings. Chartered banks and financial companies continue to seek recruits and in some cases have had to raise starting salaries.

Retail trade reports indicate that in Ontario during the first four months, sales of all kinds of goods except fuel were running ahead of last year's levels by 6.5%. Automobile sales climbed to a record May level after a slight dip in April. In Canada, sales of North American cars reached 62,700 — up 5,000 cars from last May. April sales of lumber and building materials, and variety goods registered the largest percentage gains over the previous year. Grocery and combination outlets and furniture, appliance and radio stores recovered from declines in March with sales up 5.8% and 6.6% over April last year. Though total consumer credit figures are not available, there is evidence that much of the increase in consumer buying is being financed on time. In the first quarter of 1964, finance companies extended 8.8% more credit in Canada than in the same period last year. Credit at small loan companies and department stores, and fully secured personal loans at chartered banks were up 11.3%, 8.1% and 12.2%.

In May the cost of living index remained stable at 135.0. Though prices advanced slightly in housing, health, recreation, tobacco and alco-



hol, they were offset by decreases in the cost of food, clothing and transportation.

#### FINANCE

Relatively easy money conditions prevailed throughout the month of May on the Canadian money market. The interest rates for day-and-short-term funds declined by the month end to their lowest levels since last October.

Strength in all sections of Canadian bond markets was reflected by continuing price improvements of outstanding issues during most of May. Towards the end of the month, however, a weakening of prices occurred. Impending federal and provincial refunding requirements were regarded as the main contributing factor prompting the market's current cautious tone. Prices of outstanding quality-debt issues, nevertheless, closed the month ahead 50 cents on average — the largest gains being recorded by the longer-term issues. New Canadian bond financing for the first five months of 1964 totalled \$1.50 billion, a decrease of 22% from the \$1.92 billion raised in the same period last year.

On light trading volume, prices of quality industrial equities listed on the Canadian stock markets continued their uptrend throughout May. The interest of both Canadian and American investors in several key blue-chip issues highlighted the market's broad advance. The Toronto Stock Exchange Industrial Index advanced to new all-time closing highs rather steadily during the month to close at a level of 156.53. This represents an advance of 5.44 points on Index or 3.6% over the month.

Canada's foreign exchange reserves increased by \$28.3 million during May to close the month at a level of \$2,509.4 million. Officials have stated this improvement is largely attributable to Canada's improved merchandise trade position. Recent cash wheat sales to Russia have buffered the Canadian dollar and exchange reserves which were under pressure from the decline in sale of Canadian securities in the U.S.

During May, the Canadian dollar fluctuated in terms of U.S. funds between 92.38 cents and 92.56 cents to close the month at 92.56 cents, up 0.05 cents from the previous month's closing level of 92.51 cents. The low point in the value of the Canadian dollar took place early in the month arising out of exceptionally large quarterly payments of dividends to foreigners. This has subsequently been offset by an increase in Canadian merchandise exports and increased debt financing being carried out in the U.S. markets.

#### FOREIGN TRADE

Exports in April were 27% above last April and in the first four months, were up 22.1% from 1963. Exports of wheat, newsprint paper and wood pulp continued to head the list followed by exports of lumber, aluminum and petroleum. Exports of aircraft complete with engines, at \$54 million, were up 300% in the January to April period.

Several Ontario-based companies have recently won export orders or are setting up manufacturing concerns in the United States. Dominion Electrohome is planning a 22,500 square foot plant at Elk Grove near Chicago, and Colonial Jewellery Ltd. of Toronto is successfully cracking the tough U.S. jewellery market with a subsidiary operation in Chicago. Clair-tone Sound Corporation recently announced a contract to manufacture stereo phonographs for the Wurlitzer Company for distribution in the United States. The Toronto plant of Beckman Instruments Inc. won a \$1.3 million American order for computers and data collecting systems.

### SPECIAL NOTE

This month we are inserting a table showing the percentage change between 1962 and 1963 of 11 selected indicators of economic activity in 22 Ontario municipalities. Most of the actual data on which this table was based can be found separately in publications of federal and provincial departments and agencies.

We believe that the publication of a number of indicators of economic activity for individual municipalities will be a useful addition to understanding the economic problems and the changes which are occurring in the different regions of Ontario. We are building up monthly data for 17 indicators for these 22 centres and hope to publish them regularly in the future. A smaller number of indicators are available for other Ontario municipalities. We should appreciate receiving comments from readers of the Review on the usefulness and format of regular publication of local economic indicators.

In this issue, we are also introducing a new format for the charts. We are now using a semi-logarithmic scale and have plotted for some series both seasonally adjusted data and a trend line. This method of presentation will serve to facilitate comparisons of rates of change between various series. The data contained in the table on the last page of the Review are all seasonally adjusted figures except for the four indicators at the foot of the table.

The signed article this month is one of several in which will be highlighted various aspects of regional economic analysis and the characteristics of different economic regions in Ontario. In the coming year the Department of Economics and Development will be concentrating

attention on regional development in this province. Among other activities, it is planning a conference on regional development to be held in Toronto on February 15, 16 and 17, 1965, at which papers from outstanding authorities from Canada and other countries will be presented.

## THE APPROACH OF REGIONAL ANALYSIS

JOHN BURKUS

*Economist*

*Economics Branch*

ONTARIO DEPARTMENT OF ECONOMICS AND DEVELOPMENT

In essence the technique of regional analysis is one which disaggregates the components of economic activity from the national level to a regional or a sub-regional one. Regional analysis, therefore, can be thought of as a form of study dealing with both composite and sectoral economic activities. Attention is focused on the various components which together determine the level of economic activity in the region. In a limited sense, a region is the national economy in miniature.

The limits or boundaries of an economic region are commonly defined, for purposes of analysis, in terms of geography. In all cases the variables to be considered for inclusion in a particular region are, in effect, variations on a theme of homogeneity. Likeness may be based on a combination of physical, geographical, or institutional factors. The region may be defined in terms of an area around which is concentrated or polarized a particular dominant economic activity or group of activities. A mining community or agricultural area are examples.

A region may also be defined in a more restricted sense. For some purposes the region may be defined in such a way as to concentrate attention on a small group or even a single variable. For example, the homogeneity criteria may apply with respect to taxes, labour force composition or any other variable considered significant in analyzing the structure or performance of the region.

While the use of geographic or administrative boundaries is a useful device for establishing limits, the real economic limits of a region are not likely to be as rigid. Some studies in regional economics have suggested that a good first approximation of the influence of a region may be determined by the limits of its newspaper circulation. If this criteria were used, a region would not have a definite boundary but one in which

the influence of the focal urban centre shaded off or diminished directly with distance from it.

Regions may also be defined or delineated in terms of the extent of correlation which may exist in the direction and magnitude of changes in income and employment. If incomes are positively correlated then two areas for the purposes of analysis may be defined as one or as being parts of the same region. On the other hand, if the income correlation is negative between two areas, they may be competitive rather than complementary. In this case the two would be classified as separate regions. Since all regions within a country are to some extent in competition one with the other this criterion cannot be rigidly applied because regions could not then be defined. A corporation may be assigned for purposes of study to a particular region but this does not mean that its income generating capacity is bounded by that region. Ownership of the firm and the bulk of sales and purchases of goods may take place elsewhere. In effect real competition and market forces are external to the region.

The residents of an area may delineate the boundaries of a region because they collectively act as if it were a region. These limits may or may not coincide with the actual economic determinants. For example, the adverse reaction of communities adjacent to Brant County when the county was declared a "designated area" by the Federal Government provides an example. Kitchener, Galt and Preston considered themselves to be part of the same economic region as Brantford and objected to special tax incentives to new industries because these were not extended beyond Brant County.

An important characteristic of a regional economy is that it is a more open economy than the national economy. The term "open" is used to indicate that artificial restraints or barriers to trade



are much less important in a regional economy than in a national one. For a region barriers arising from inadequate transportation facilities are usually a more important restraint on inter-regional trade. Tariffs, quotas or lack of foreign exchange are not factors with which a region must contend if the bulk of its trading activities are carried out on an intra-regional or inter-regional basis. In this sense the location and level of economic activity within a region is determined by the rule of comparative advantage.

Economists who have written about regional analysis have drawn on and contributed to international trade theory. For example, inter-regional trade may be examined in terms of exports and imports. In which region a particular industry will be established will depend on each region's comparative advantage within the national economy. The essentially "open system" of a region can be analyzed as if it were a closed one. External trade characteristics could then be used to delineate regions. Except where the prime activity of a region is centred on the export of a commodity which is not consumed in quantities in the national market, the bulk of a region's trade is usually with other regions in the nation. How much of it is intra-regional will depend on the geographical limits of the region and on the characteristics of its industry.

If for purposes of regional analysis an international trade balance of payments approach is used any "imbalances" which arise in a region become "balanced" via price and income changes which occur in a free market. The penalty for persistent regional imbalance may be a combination of declining per capita incomes and high levels of unemployment.

Another method which has been used in regional analysis studies calls for grouping industries in terms of "base-service" relationships. Industries are grouped according to whether their output is "exported", either abroad or to other parts of the nation, or consumed within the region. Regional service industries, in turn are grouped according to whether their output goes to "export" industries or is used by industries whose demand is primarily domestically oriented. If this method is used estimates of output destination and consumption for each industry must be made. The "base-service" concept has been used in some regional studies to estimate levels of population or employment which could be supported by the resources of the region.

Regional analysis is invaluable in isolating and examining the differential impact of provin-

cial programs and policies or national fiscal, monetary and commercial policies on various regional economies. The effects of minimum wages, tax incentives, tariff changes, quotas or currency devaluation can be more accurately evaluated in terms of their impact on various economic regions. Regional analysis thus facilitates the assessment of potential gains or losses which arise from policy changes. Information on regional industry structures and employment conditions can prove to be valuable in determining whether or not the region can readily respond to changes in external demand.

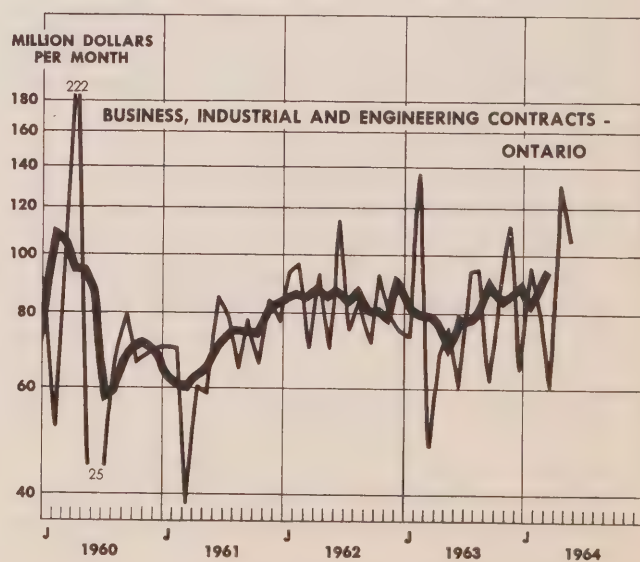
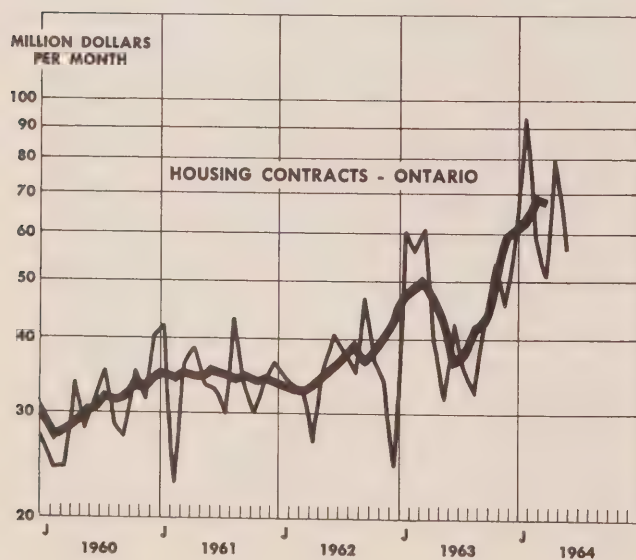
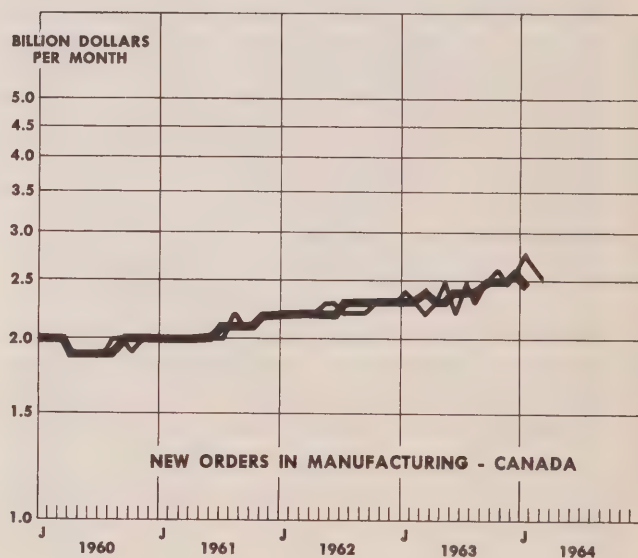
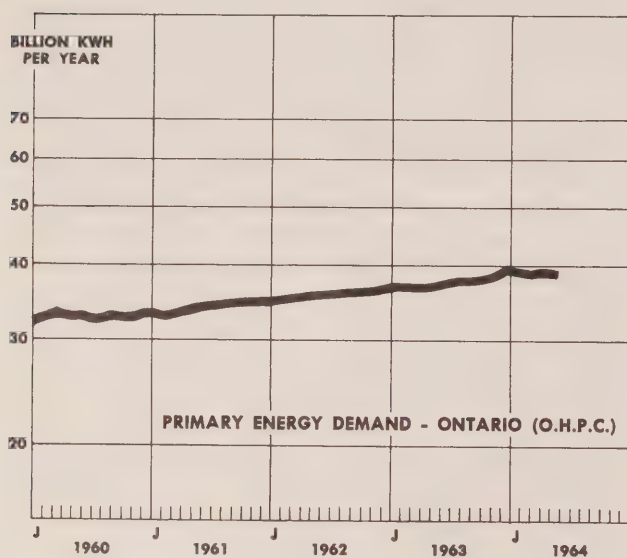
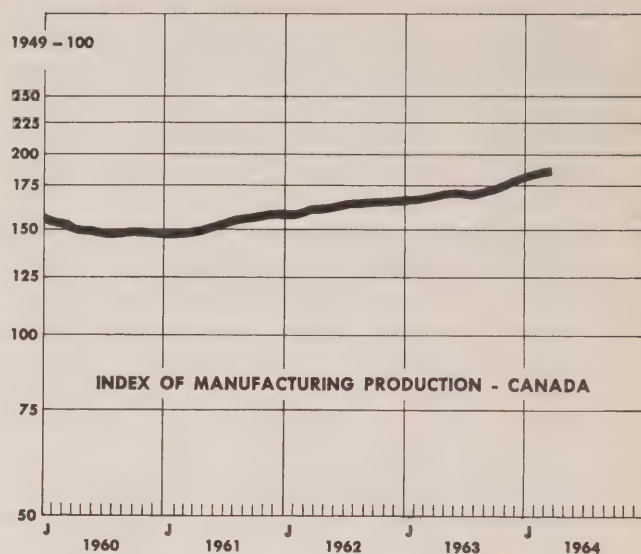
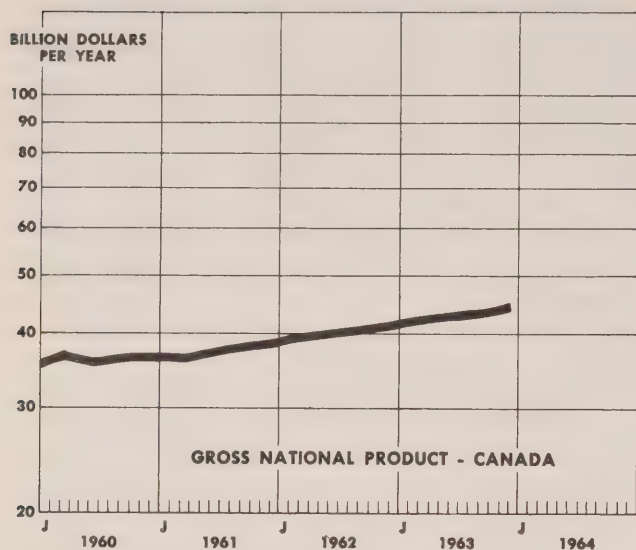
Regional studies have focused attention on the "space connecting" variables such as barriers to mobility, transportation and plant location. In recent years regional input-output tables have also been constructed. The relationship of regional cycles to national ones is also an aspect of regional analysis.

Because regional analysis is, by definition, the study of part of the national economic structure, rather than the whole, movements in regional economic indicators must be interpreted with caution. A region which has but a single industry and thereby lacks a diversified economic structure may show marked fluctuations in employment and incomes although very little change may have taken place in the national industry as a whole. The magnitude of these fluctuations and rate at which they will be transmitted to other firms in the region will depend on the nature of intra-regional multipliers. If local firms are all export oriented with respect to the region, then changes in the level of activity in a single firm may have little or no effect on employment in other firms.

Regional analysis is a useful tool to determine the type of industry which is likely to flourish in the region. The extent to which industries are resource or market oriented or "footloose" can provide valuable insights. Developmental policies which complement the existing or potential resources of the region can then be pursued. An analysis of the industry mix of a region can be used to assess the probable benefits and costs of balanced growth. Diversification which takes the form of introducing less efficient industries may result in lower per capita incomes. But in many cases it enhances the community's ability to absorb workers from declining industries.

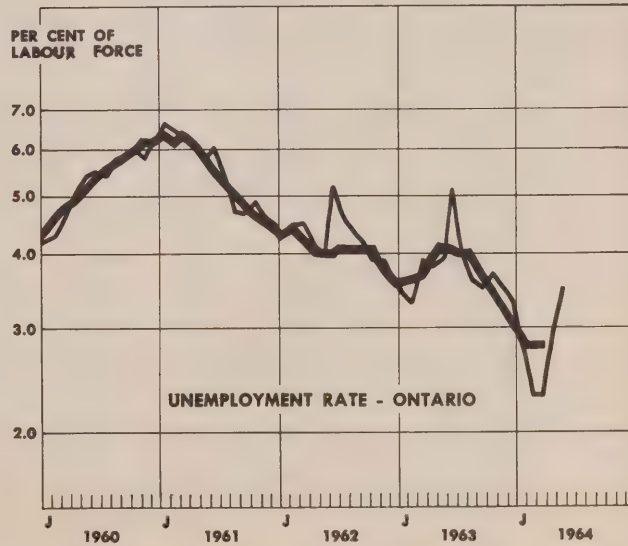
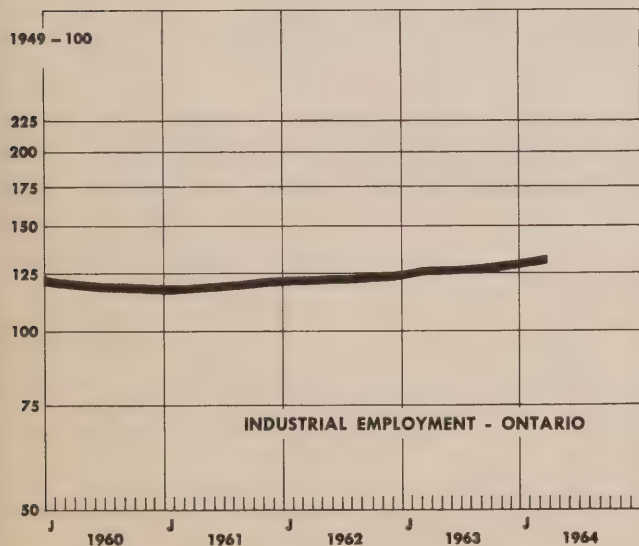
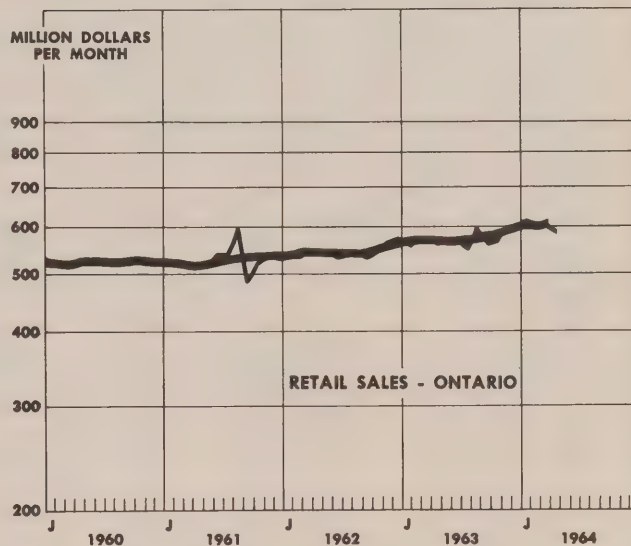
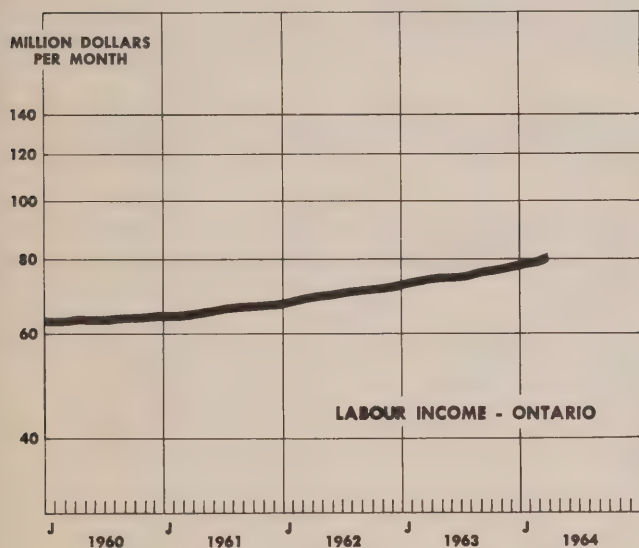
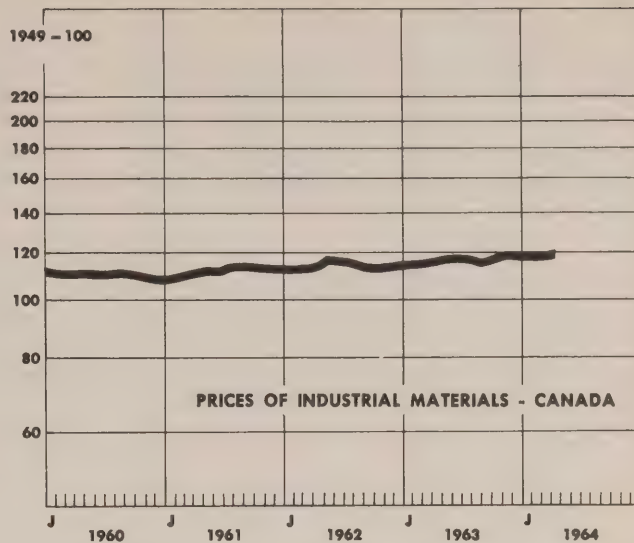
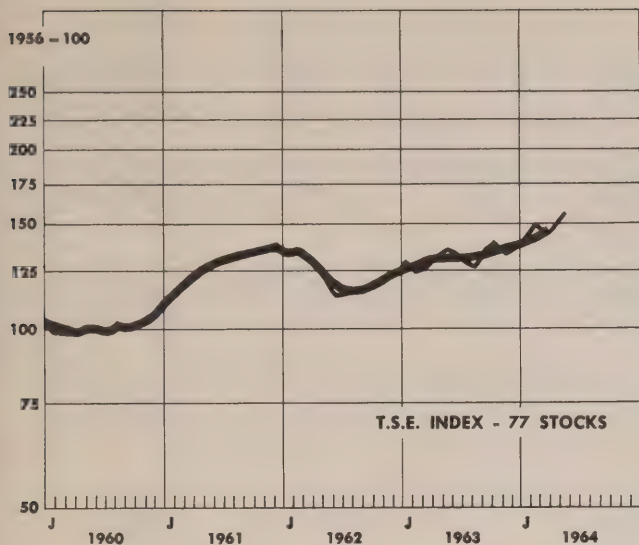
In essence the concept of region is a useful analytical device which facilitates inter-temporal comparisons of economic activity. The greatest appeal of regional analysis lies in its essentially pragmatic character.

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED





# ECONOMIC INDICATORS — SEASONALLY ADJUSTED



— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES

## LEADING INDICATORS

		1963					1964									
		April	May	June	July	August	September	October	November	December	January	February	March	April	May	
Average Weekly Hours Worked in Manufacturing		41.2	41.1	40.7	40.7	40.6	40.8	40.9	41.5	40.6	41.6	41.4	40.9			
Business Failures - Number	(No.)	77	110	103	87	84	98	97	92	103	73	81	61			
Business Failures - Liabilities	\$ 000	3,662	9,038	9,379	4,135	3,606	6,902	4,473	5,139	5,194	3,493	1,574	2,194	75		
New Orders in Manufacturing*	\$ Million	2,349	2,453	2,231	2,471	2,336	2,478	2,558	2,493	2,607	2,753	2,624	2,490	6,754		
T.S.E. Index - 77 Stocks	1956=100	132.0	135.1	133.8	128.2	127.1	135.9	138.0	133.1	136.1	140.5	138.7	143.3	148.6	155.3	
New Dwelling Unit Starts	(No.)	3,992	4,530	3,718	4,361	4,219	3,624	4,421	3,399	5,694	5,470	4,899	3,676			
Housing Contracts	\$ Million	39.6	31.9	42.9	35.4	32.7	43.6	53.8	45.4	60.8	94.5	58.8	51.5	80.0	56.9	
Business, Industrial and Engineering Contracts	\$ Million	67.0	76.0	60.2	94.5	94.9	61.7	89.1	112.6	64.9	95.5	78.8	60.1	130.3	104.9	
Money Supply*	\$ Million	15,629	15,771	15,957	16,091	16,081	16,165	16,434	16,522	16,612	16,797	16,759	16,863	17,003	17,095	

## COINCIDENTAL AND LAGGING INDICATORS

[illegible]



SELECTED INDICATORS OF ECONOMIC GROWTH FOR 22 ONTARIO MUNICIPALITIES  
Percentage Change 1962 - 1963

Municipality**	Registration for Employment		Population on Welfare		Average Weekly Wages and Salaries		Average Weekly Hours		Manufacturing		Average Weekly Wages		Residential		Energy Consumption	
	Cheques Cashied \$	\$ (1)	\$ (2)	\$	\$	\$	\$	\$	Average Hourly Earnings \$	\$	\$	\$	\$	\$	Commercial \$	Industrial \$
Bramford	8.1	- 15	- 23.1	6.7	5.8	1.2	7.2	8.4	5	- 2	11					
Cornwall	8.9	- 7	- 5.8	n.a.	n.a.	- 0.7	2.6	0.1	n.a.	n.a.	n.a.					
Fort William	8.8	- 10	- 8.0	3.3	2.6	- 1.1	2.1	1.1	3	8	10					
Galt	n.a.	- 21	- 4.9	6.5	3.2	0.5	3.6	7.8	9	- 3	10					
Guelph	12.9	8	n.a.	4.8	3.1	- 0.8	3.1	2.3	2	16	8					
Hamilton	10.7	- 1	- 3.4	4.2	2.1	- 0.3	2.4	2.1	5	7	13					
Kingston	13.2	4	3.0	3.8	4.0	0.2	3.6	3.8	4	7	2					
Kitchener	13.6	- 3	- 33.2	7.7	1.7	- 0.4	2.9	2.6	5	6	11					
London	13.7	- 3	26.3	4.3	3.1	0.5	3.8	4.3	7	17	6					
Niagara Falls	5.3	8	- 10.8	1.1	0.8	0.4	4.1	4.4	n.a.	n.a.	n.a.					
Oshawa	18.9	2	10.0	10.1	5.2	1.5	4.6	6.1	9	6	11					
Ottawa	10.5	- 8	20.6	2.3	2.7	0.1	3.6	3.7	3	8	- 1					
Peterborough	13.1	- 12	- 15.3	5.3	3.0	0.0	3.7	3.7	7	13	10					
Port Arthur	9.6	- 6	23.3	3.3	2.6	- 1.1	2.1	1.1	- 2	10	16					
St. Catharines	6.7	- 6	- 3.8	3.2	3.5	0.6	3.8	4.5	3	6	8					
Sarnia	- 2.2	11	- 21.1	3.3	3.3	0.5	3.1	2.8	- 2	15	11					
Sault Ste. Marie	9.8	- 34	39.2	3.1	5.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.					
Sudbury	2.5	- 27	40.6	- 10.2	2.1	n.a.	n.a.	n.a.	3	10	2					
Timmins	3.8	- 2	- 7.6	- 0.8	1.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.					
Toronto	7.6	- 2	0.9	3.4	3.6	0.3	3.5	3.4	2	2	7					
Windsor	16.8	- 24	- 24.9	7.2	5.0	3.5	4.4	8.0	2	4	18					
Woodstock	n.a.	- 13	n.a.	n.a.	n.a.	- 0.9	2.3	1.3	6	8	4					
Province of Ontario	8.5	- 7	0.1*	3.2	3.3	0.3	3.7	4.0	5*	10*	10*					

(1) December 1962 - December 1963 Change - not annual change.

(2) December 1962 - December 1963 Change - not annual change.

\* The entries with an asterisk are changes in the totals of the reporting centres - not provincial totals.

\*\* The geographic area is not necessarily the same for each series.

Source: Economics Branch, Department of Economics and Development





3  
PERIODICALS READING ROOM  
(Humanities and Social Sciences)

# ONTARIO ECONOMIC REVIEW



DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. S. J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*

JULY 1964  
VOL. 2  
NO. 3







# THE ONTARIO ECONOMY

Now in its forty-second month, the business expansion in North America is still vigorous. In Canada, private and public investment for the year 1964 is expected to be 16% higher than that of last year, compared with a previously anticipated rise of only 8% for this year. The highest gains are expected in manufacturing — 31% — including 35% for machinery and equipment and 22% for plants. In both Canada and Ontario, the labour force increased sharply in June, resulting in slightly higher unemployment levels. Canadian exports rose for the third consecutive month to reach a May level of over 670 million dollars. Imports rose steeply in April, resulting in the first merchandise trade deficit since June of last year.

## PRODUCTION

Industrial production has shown varying trends in the last three months. Declines in May and again in June in both housing contracts and business, industrial, and engineering contracts were reflected by lower May production levels of concrete bricks, concrete blocks, cement and asphalt roofing. Though these levels were lower than those of May last year, production was up for the first five months.

Rises in the steel industry and the automobile and truck industry offset declines in the construction field. Operating at above rated capacities, steel producers increased output 12% in the first five months over the same period last year. In fact for both steel ingot and pig iron, production in the first five month period has been higher than that of the entire year a scant decade ago. June of this year saw a new record in production of automobiles and trucks — 76,243 units. June sales were estimated at 56,426 North American cars and 10,018 North American trucks. In the first four months, Ontario accounted for 41% of the Canadian consumption of passenger cars.

Based on 1949 = 100, the durable manufacturing index was 196.2 in April, more than recovering the slight drop in March from the index for February. In April, factory shipments rose to \$2,638 million of which \$1,358 million represented Ontario's share. In this province the increase from March was due mainly to higher values in foods and beverages, textiles, primary metals, metal fabricating, transportation equipment and electrical products.

Mining production increased in April in all three categories — metals, gold and fuels. On a 1949 base the general mining index moved 7.6 points in one month and was at 324.9 in April. Lead production increased from 15,665 tons in April 1963 to 17,001 tons in April of this year. Silver production declined resulting in a 3.8% drop in the first four months over the same period last year. Zinc production leapt ahead 64% from April of last year. Total production for the first four months was

221,171 tons in comparison with a four month production of 162,889 tons in 1963. The Timmins area has been the centre of much interest last month as speculation arises over the possible discovery of copper and zinc. The Texas Gulf Sulphur Co., which made the April discovery, is considering a deep water location in Ontario for a \$50 million smelter. It may be built on Lake Ontario or Lake Huron.

In forestry based industries, production was running ahead of last years levels in most lines. Output of fine paper was 33,400 tons in May, and total production was up 10.7% over the first five months of last year. Shipments of rigid insulating board dropped in April from that month last year, nevertheless totals for the first four months were 22.6% higher than those of the corresponding period last year. For the first five months, domestic shipments of hard board were down from the same period last year. This movement was offset by rising export shipments. Shipments of veneers declined 12% in May from that month last year. Plywood shipments rose 8% in a May to May comparison and were up 25% on the first five months comparison.

## CONSTRUCTION

After a remarkable winter, the values of both housing contracts and business, industrial and engineering contracts fell on a seasonally adjusted basis. Ontario housing contracts for June stood at \$40.1 million and commercial and industrial Ontario contracts were valued at \$81.5 million for the same month. Despite these declines — 32% and 23% respectively from May of this year — the total value of contracts of both categories was a healthy 24% ahead of last year in a comparison of January to June periods.

Some of the more outstanding plans, contract awards, or construction starts in Ontario are outlined below. In Toronto an \$85 million complex involving a 35-story office building, one 23-story and three 28-story apartment towers totalling 2,000 suites received approval of the Toronto City Council. This project will be in the Bay St.-York St. area at the waterfront. This fall Yolles and Rotenburg will begin construction on a 27-story office building in downtown Toronto. In this area, Canada Trust-Huron and Erie, will be building an 18-story office building costing more than \$5 million.

Central Mortgage and Housing Corporation approved a loan of \$1.6 million to North York Township for construction of 295 low-rental units. Mitchell Construction Co. will build a \$1.2 million office in Willowdale for the Hydro-Electric Commission of North York Township. York University awarded a \$2.5 million contract to Taylor Woodrow of Canada for construction of a college and a dining building. Near the Toronto International Airport, Renforth Developments Ltd. plans to build a \$2 million addition to the Constellation Hotel increasing its size by 150 rooms.

In London, the Foodway division of M. Loeb Ltd. will be building a \$1.5 million wholesale centre to serve about 80 Independent Grocers Alliance supermarkets in southwestern Ontario. In Ajax, Du Pont of Canada plans to build a \$3 million expansion to its industrial finishes paint plant. A \$1.7 million contract for a 120-unit apartment block in Ottawa was awarded to Janin Building and Civil Works Ltd. by Manor Hill Investments Ltd. The Peel Construction Co. of Brampton started work recently on a \$1 million widening and rebuilding of the No. 6 and No. 403 highways just outside Hamilton. Queen's University in Kingston awarded a \$2.7 million contract to T. A. André and Sons for a men's residence of 272 rooms. In Brantford, Schultz Construction Ltd. will build a \$465,000 office and warehouse for Agnew Surpass Shoes Ltd. A one million dollar contract for an extension to the Elgin General Hospital at St. Thomas went to W. A. McDougal Construction Ltd. of London.

Because of heavy demands by the construction industry, the Lake Ontario Portland Cement Co. will expand its plant at Picton. The \$6 million expansion will be handled by A. E. Rule Ltd. of Toronto. An exceptional automobile year has caused the Dominion Rubber Co. to start construction on a \$5 million plant in Lindsay. It will begin manufacturing tire cord some time next summer. In a related field is the recent American Motor's decision to expand their Brampton plant. The \$2.5 million building will be capable of turning out 200 engines per eight-hour shift.

#### EMPLOYMENT

Employment in Ontario is up more than the usual seasonal number in June to bring total employment on a seasonally adjusted basis to 2,457,000, about 15,000 above the May figure. The growing number of young people entering the labour market each year for the past two years has brought an unusually large increase in the total work force. As a result, employment actually increased between May and June, although there is usually a continuing decline at this time of year. Therefore, unemployment, on a seasonally adjusted basis, rose sharply during the month.

Hirings have been heavy in the construction, saw and planing mill, quarrying and commercial enterprises. There are still some shortages in the highly skilled metal working trades and in a few other selected occupations. A good number of the students who registered for jobs in June have been placed during the summer.

At the end of June, 20 of the 35 Ontario labour market areas were reported in balance by the Department of Labour in Ottawa.

#### SALES

Canadian department store sales totalled \$631 million for the first five months of 1964. This was a gain of 9.7% over the same period last year. However, current gains are slowing down. The May 1963 to May 1964 increase was 5.1%. Chain store sales in May were up 9.7% over May of last year with sales of men's clothing, variety stores and family clothing showing the largest gains. The lumber and building material outlets were the only ones to show declines. This followed exceptionally good rises in April. Amongst the many durable consumer good sales to show gains this year, the sales of

washing machines led the way with a 24% gain in the first four months compared with last year.

Credit statistics indicate that consumers are continuing to increase their debt burden. One appropriate example is brought out by the sale of new passenger cars in Ontario. The latest figures are for April and indicate that though the number of cars financed increased by 4% over last April, the value of the financing increased 11% to 17.8 million dollars. It is estimated that for the country, consumers may be in debt as much as 20% of their personal disposable income (counting all forms of credit including credit card purchases).

#### PRICES

Despite the length of the current boom, consumer prices have been kept in line, edging forward 1.9% over the last twelve months. The June price index for consumer goods was 135.3 - (1949 = 100) - up 0.2% from May. This rise was mostly due to increases in the food group and lesser increases in housing and clothing. The 1.0% gain in one month in food prices was partially offset by declines in the prices of recreation and transportation (lower rail and bus fares in Ontario and Quebec). The wholesale price index actually declined from a year ago. Based on 1935-39 = 100 the wholesale index in June, 1964, was 245.4 compared to 245.7 for June, 1963. Increases in prices of animal products and chemical products were offset by declines in prices of vegetable products. A third index - that of prices of industrial materials - has moved up 1.9% in the twelve months since June, 1963.

#### FINANCE

The interest rate structure of the Canadian money market was subject to only minor changes during June. In general loanable funds were in good supply, meeting the needs of all sectors of the market. For example, the day-to-day loan rate essentially was quoted at 3% throughout the period with fluctuations being confined to one-half of one per cent.

Highlighting activity on the Canadian bond market was a new \$250 million Government of Canada issue. This refunding issue comprised offerings in two parts which were additions to maturities already outstanding. Most of the new borrowing (\$200 million) carried a coupon of 3½% with a one-year maturity while the balance was a 5¼ issue due to mature May 1, 1990. The bulk of the proceeds of the new issue are to be used to redeem \$175 million 3¼ Canada bonds due July 1, 1964. The quick absorption of these new offerings prompted fractional price improvement of other outstanding issues generally. New Canadian bond financing for the first half of 1964 totalled \$1.82 billion, a decrease of 12.6% from the \$2.09 billion raised in the same period last year.

The uptrend in prices of industrial equities listed on the Canadian stock exchanges was maintained throughout most of June. Optimism was stimulated by recent speculative mining discoveries in Northern Ontario and the announcement of a larger than anticipated gain in Canada's Gross National Product for the 1st Quarter of 1964. The Toronto Stock Exchange Industrial Index closed the month of June at its then all-time closing high of 157.01.



Canada's foreign exchange reserves (official holdings of gold and U.S. dollars) increased by 24.5 million during June to close the month at a level of \$2,533.9 million.

The value of the Canadian dollar in terms of U.S. funds remained fairly constant throughout most of June. However, a slight decline was evident at month-end when it closed at 92.44 cents, down 0.12 cents from last month's closing quotation.

#### FOREIGN TRADE

In the first five months, exports rose 17.5% from the same period last year. The May level was \$670.5 million with sales of wheat, wood pulp, crude petroleum, iron ores and concentrates, and copper and alloys showing increases. Exports of newsprint paper, softwood lumber, aluminium and alloys and nickel slipped a little compared with May, 1963, but were still higher than last year over the first five months. Rising levels of imports are causing some concern with April's level some 23% above that of March. Compared with last April, imports from the United States were up 32% and from the United Kingdom 31%. However, it has been suggested that an early opening of the St. Lawrence River ports

caused the spring peak to take place in April instead of May.

Some of the recent external contracts that will be of direct consequence to the Ontario economy include the following: General Motors Diesel Ltd. of London received a \$900,000 order for five locomotives from the New Zealand Government, the National Cash Register Co. of Canada won a \$1.5 million order for office equipment for Japan and Australia, and the Robert B. Somerville Co. of Toronto in association with McAlpine Construction Co. of South Africa was awarded a contract for a 450 mile pipeline from Durban to Johannesburg. Foundation Overseas Ltd. of Toronto was awarded the prime contract for building a \$65 million hydro-electric power project in India. This project is one of the largest in India and is expected to take five years to complete.

*NOTE: In the June issue of this publication, there was an insert on selected indicators of economic growth for 22 Ontario municipalities. The series titled "Energy Consumption" should be retitled "Consumption of Electrical Energy Supplied by the Hydro Electric Power Commission of Ontario".*

## THE NIAGARA ECONOMIC REGION PRESENT CHARACTERISTICS AND PROSPECTS FOR THE FUTURE

MRS. D. M. CALLENDER,

*Economist, Special Research and Surveys Branch*

ONTARIO DEPARTMENT OF ECONOMICS AND DEVELOPMENT

The outstanding characteristics of the present economy of the Niagara Region are its propitious location in relation to domestic and foreign markets, its soil and its climate. It is upon the basis of these three factors that the Region's broad and dynamic manufacturing activities, its unique agriculture and its service industries have developed.

The Region covers an area of 2,170 square miles and includes the peninsula counties of Welland, Lincoln and Haldimand as well as the counties of Wentworth and Brant. The population of this area has exhibited a phenomenal rate of growth since the turn of the century and increased at a faster rate than the Province as a whole. During the past decade, the population was augmented by 32 per cent and now stands at 763,000.

One important facet of the Region's population growth is urbanization. In 1871 some 16 municipalities contained approximately 35 per cent of the Region's 174,600 people. By 1961, while the number of municipalities had only increased to 24, due to the rapid growth of certain centres, the urban population had increased nearly ten fold and accounted for approximately 60 per cent of the total population. In less than a century, therefore, the population in the Niagara Region changed from being largely rural to predominantly urban.

This growth in urban population is characteristic of

Canadian economic development during the twentieth century but this trend has been brought into sharper focus in the Niagara Region because certain special factors have combined to create certain problems, the most pressing of which is the decline of the fruit lands. These problems, however, may at best be understood if the characteristics of the Region's manufactures and agriculture are first discussed.

The Niagara Region's contribution to Canada's gross value of factory shipments is roughly nine per cent per annum. Goods shipped by its industries in 1961 were valued at \$2.2 billion and represented one-fifth of Ontario's gross value of factory shipments. After the Metropolitan Region, the Niagara is the most important manufacturing area in the Province.

A striking feature of the Region's industry is its broad and diversified base. Supported by the iron and steel industry, it includes the manufacture of metal products, transportation equipment, chemical and chemical products, paper, electrical products, non-metallic minerals, textiles, foods and beverages, wood and furniture, tobacco and rubber.

Industrial activity in the Region is rather unevenly distributed. There is an extremely heavy industrial concentration in Hamilton while there is much less in Brantford, St. Catharines and Welland. The heavy concentra-

tion in Hamilton is attributed to the fact that the steel industry and its related manufacturers are all located there. Hamilton is the third largest producer of manufactured goods in Canada. The annual output of the city's iron and steel mills alone is approximately \$400 million — this represents well over one-half of Canada's annual production and ranks Hamilton as a major producer of iron and steel in North America. Other large manufacturers in Hamilton are Canadian Westinghouse Company Limited, International Harvester Company of Canada, Limited, Otis Elevator Company Limited, Procter and Gamble Company of Canada Limited, National Steel Car Corporation.

Brantford is the second largest contributor to the Region's manufacturing output. In 1961, the city's industries shipped goods valued at \$155.6 million. While this figure is lower than the 1960 total, it is not as low as the average level which prevailed between 1951 and 1958. Recently, manufacturing activity in Brantford has slowed but there is no reason to think this decline is permanent. The city's principal manufacturing group is the agricultural implement industry, which is led by Massey-Ferguson Limited and Cockshutt Farm Equipment of Canada Limited. St. Catharines is a centre for metal fabricating industries, transportation equipment and automotive parts.

While the Region's manufacturing industries have grown primarily as a consequence of their proximity to large urban complexes of North America, other factors — power and transportation — have contributed to their development. These factors are related in one way or another to the Region's water resources. Water has not only been a major factor in the location of the Region's cities and towns and in the development of particular types of industry, but it has supplied the Peninsula with abundant hydro-electric power and transportation facilities.

The high degree of industrial and commercial activity conducted throughout the Niagara Region today requires the use of large quantities of electricity and coal. These two sources of power have both been made readily available to the Region's industries through the presence of its water resources. The Region was the scene of Ontario's earliest large-scale hydro-electric power development and many of its present industries. The manufacture of pulp and paper and abrasives, for example, were initially attracted to the area by the existence of large quantities of low-cost hydro-electricity. Water has also provided important transportation routes for the Niagara area. The impact of the Welland Canal on the Region over the years is well known. Today, the Canal continues to provide a major highway for the import of raw materials and fuel for the Niagara's industries as well as for the export of its products.

The world-famous scenic attractions of the Niagara Peninsula are, again, a direct consequence of its water resources. The widespread ownership of cars has made the recreational facilities of the area readily accessible to the average person. With the shorter work week and the expansion in road construction, these attractions have become increasingly the basis of a thriving tourist industry. The importance of this industry is reflected in the increase in tourist establishments and in the fact that the economies of certain centres such as Niagara Falls and Crystal Beach are heavily dependent upon the tourist trade.

Thus, the natural resources of the Niagara Region have been an important factor in the economic development of the Region. The significance of the Region's natural resources in the economic development of the Niagara Region does not end with water; its special soil, weather and drainage also have contributed to the development of the area's unique agricultural sector. It is common knowledge that the Niagara Peninsula is one of Canada's most productive fruit belts. Indeed, this often obscures the fact that the Peninsula is a major manufacturing area in Canada. It is the existence of a dynamic industrial complex and a unique agricultural agglomeration side by side which have precipitated special problems of land-use in the Niagara Region.

The importance of the Niagara Region as a fruit-growing area lies not so much in the actual value of fruit produced nor in the number of persons this industry employs but in the fact that there are few alternative areas for the production of "tender fruit" on a commercial scale. The \$15 million contributed annually by fruit-growing to the Region's economy is far less than the contribution of its manufacturing industries and it is clear that the agricultural sector is no longer a large employer of labour. On the other hand, the Niagara each year produces 56 per cent of Ontario's and 27 per cent of Canada's fruit. In addition, the Province's wine industry is wholly supported by the grapes grown in this area and its fruit processing industries receive a large portion of their fruit from the Peninsula.

It has become quite clear that the amount of land employed in fruit production is declining each year. This decline has been caused by one central problem — the low income earned from fruit production. This central problem arises from various factors which include uncertain markets, low fruit prices, inefficient marketing, poor packaging facilities and urbanization.

Urbanization in the Niagara involves not only the expansion of the boundaries of cities and towns upon tender-fruit land but the haphazard sprawl of subdivisions and individual houses in the tender-fruit areas. Although urbanization has attracted more attention than any other problem in the Peninsula, its solution is extremely difficult and little has been done to direct its advance.

The Niagara Region, therefore, possesses a very diversified economic base with increasing production from both industries and farms. The economy which embraces a vibrant manufacturing sector with a hard core of primary industry, a wide range of agricultural activities with unique features in the fruit-growing sector and a flourishing service industry spearheaded by the tourist trade, thrives in an environment which offers an energetic and versatile work force, an ample supply of the major forms of energy and power as well as efficient systems of communication and transportation. What are the future prospects for such an economy?

It is estimated that by 1981 the population of the Niagara Region will probably reach 1.2 million — over 50 per cent more than the present total. The fastest growth is expected to occur in Lincoln County where the population will reach close to 225,000 by that year. The County of Wentworth, however, will continue to be the Region's most densely populated and should have a population of some 570,000.<sup>1</sup>

<sup>1</sup>These projections have been made by the Economics Branch.



The current trend towards greater urbanization is expected to continue, and it is estimated that in two decades over 80 per cent of the Region's inhabitants will be urban dwellers. A rising population and increasing urbanization will pose several problems for the Region's economy.

One such problem will arise from the increased pressure upon existing urban facilities such as water, sewage, transportation and schools. These difficulties can be remedied, however, by formulating present plans for these facilities with due consideration for this increase in demand. More basic problems may arise in the industrial sector if job creation in industry cannot keep pace with the expansion in the work force.

It is unlikely that the rapid growth of manufacturing output which took place between 1946 and 1949 will again occur in the years to come. Manufacturing in the Niagara is far more likely to grow in a manner characteristic of the decade 1950 to 1960, that is steadily, and possibly punctuated by an occasional slow-down. There are several reasons why we should expect steady growth rather than either recession or rapid growth in the Niagara Region in the next decade and a half.

Serious economic fluctuations, ranging from a serious recession to boom-conditions can be ruled out for the Region as a whole. Considering the possibility of negative developments, it is very unlikely that the existing resilient and dynamic firms would die within a decade unless some unpredictable catastrophe should occur. It is also unlikely that the firms now operating in the area will leave since the majority of firms have expressed satisfaction with their present location in the Niagara.<sup>1</sup> On the positive side, while boom expansion is a possibility with respect to specific industries, particularly in Hamilton or other urban centres, spectacular growth is not to be expected in an over-all sense. Most of the larger industries came to the area before the Second World War and the increase in economic activity since that time has been generated mainly by expansion of existing industry. The reason that only few of the very large industries located in the Peninsula after World War II was that the major attractions for industry had lost their importance. With the equalization of power rates in Ontario and with the improvement in transportation facilities so that firms find it more convenient to locate

near market areas rather than close to the distribution centres, the Peninsula proper lost some of its advantages over other parts of the Province. While, therefore, present industries may be expected to grow and expand and will provide new jobs for a growing work force, automation will undoubtedly necessitate adjustments in the labour market.

Urbanization in the Niagara Region will continue to create problems in the agricultural sector and contribute to the decline of fruit production. The difficulties of urbanization become very evident when it is realized that a solution by market forces such as prices is impossible. The income of the fruit farmer cannot be increased either by raising the price of the fruit or by increasing the supply since an increase in the price of fruit would price these farmers out of the market and an increase in the supply of fruit cannot be achieved if more land space cannot be utilized. The solution lies in a revision of the existing attitude toward the use of land. Hitherto, North Americans have relied on the price system as the major allocator for the alternate uses of land. Zoning by-laws have been introduced merely to promote orderly urban development and little has been done to prevent prime agricultural land from being converted into urban uses. Today, however, in certain areas such as the Niagara, Windsor and certain parts of California, more attention is being focused upon the need to direct urban development so that agricultural and recreational needs may be satisfied.

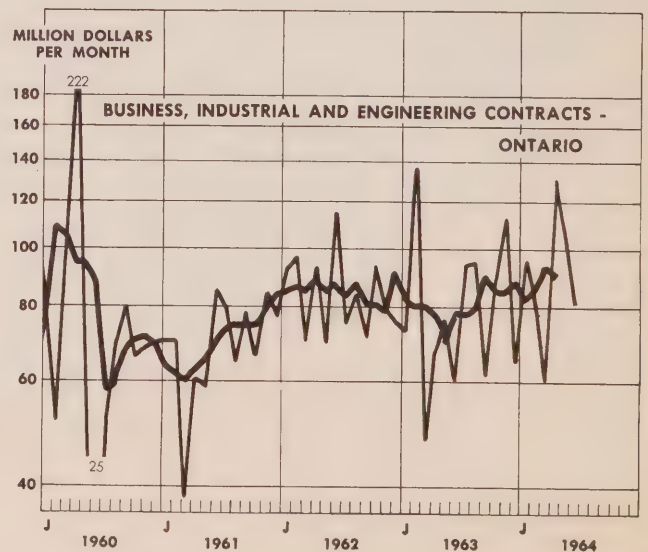
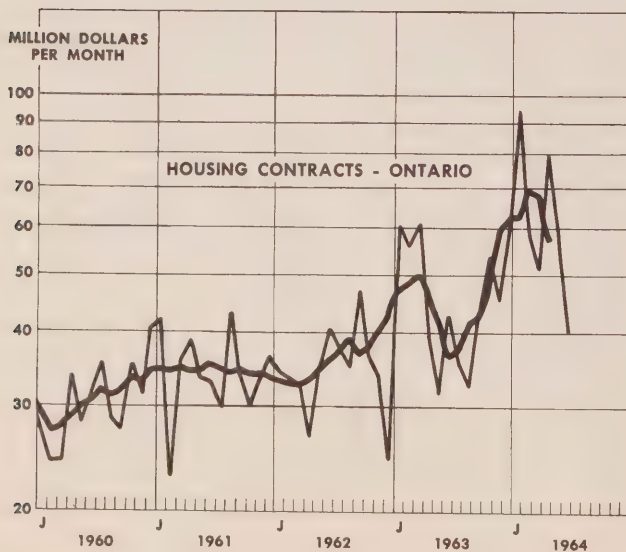
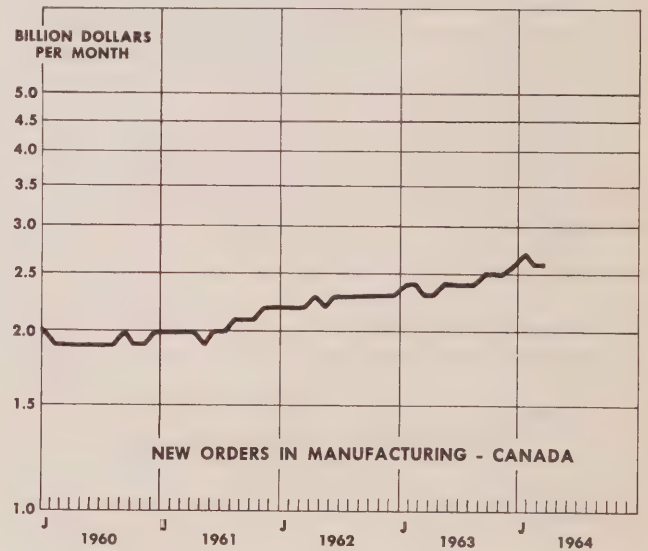
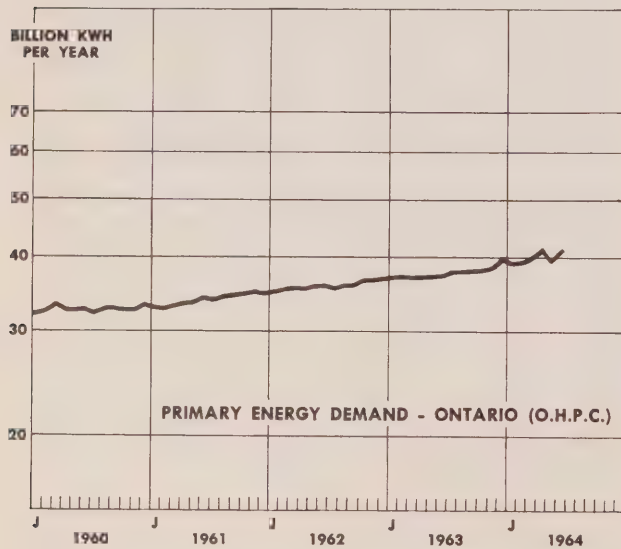
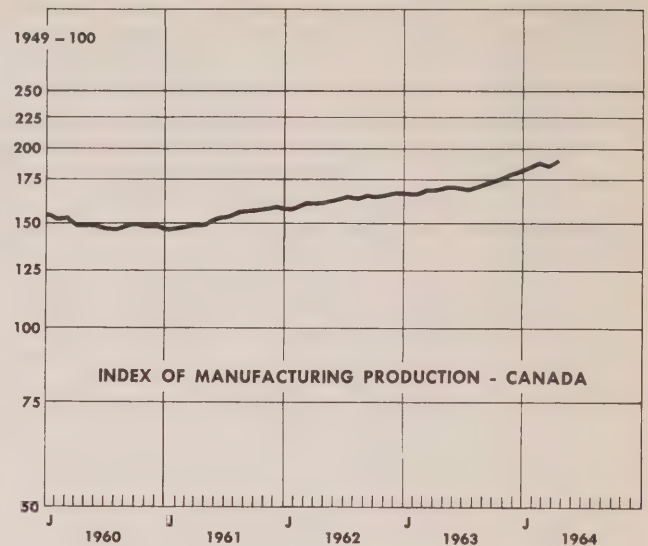
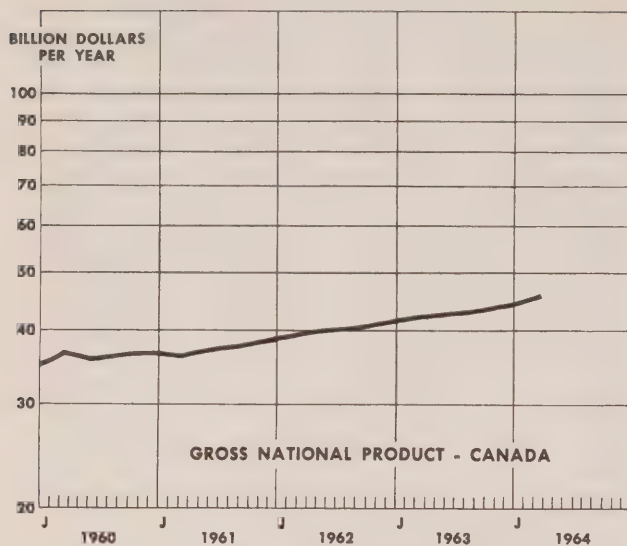
The service industry led by tourism is expected to achieve more importance in the Region's economy during the next decade. During the past ten years, employment in these industries increased more rapidly than in any other sector of the Region's economy. Tourism in Niagara could assume even greater significance if areas along the banks of the Grand River and parts of the shoreline of Lake Erie and Lake Ontario could be utilized for recreational purposes. Parts of the shoreline of Lake Ontario are already being developed for recreation. With an increasing population and a shorter work week, more recreational facilities will be required, and the Niagara Region is in an excellent position to attract an even larger share of tourist expenditure.

In summary, therefore, the Niagara Region's economy is strong, dynamic and diversified and is expected to grow at a steady rate during the next two decades. While certain problems will arise, the present characteristics of the Region's economy will dominate and direct its growth.

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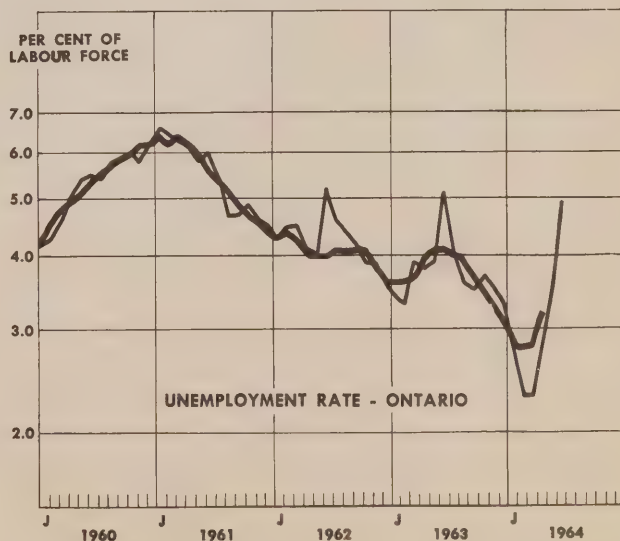
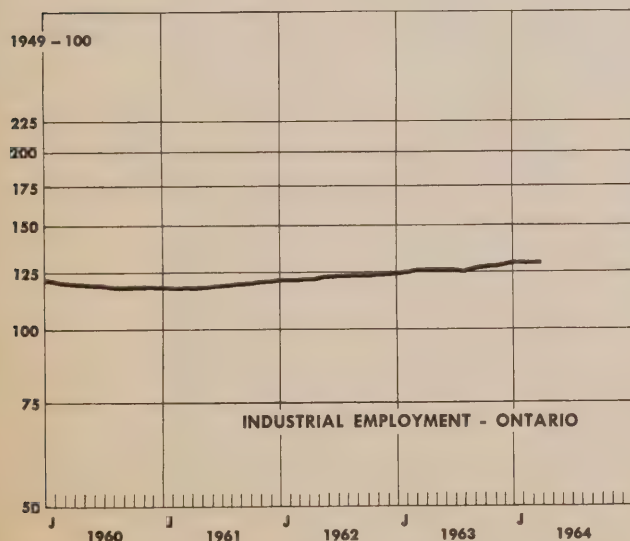
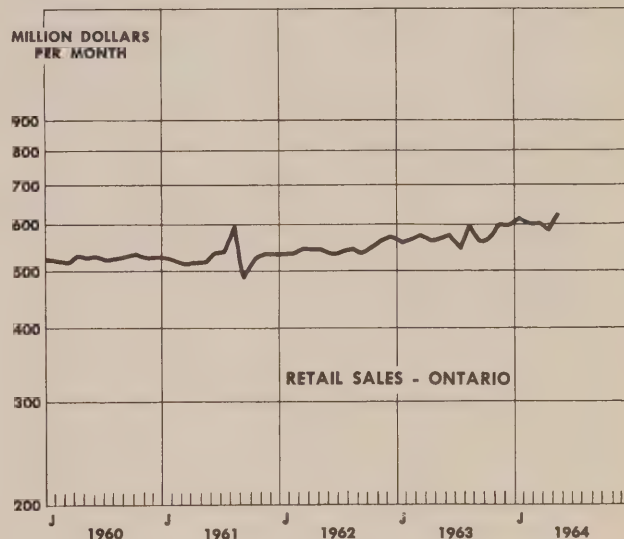
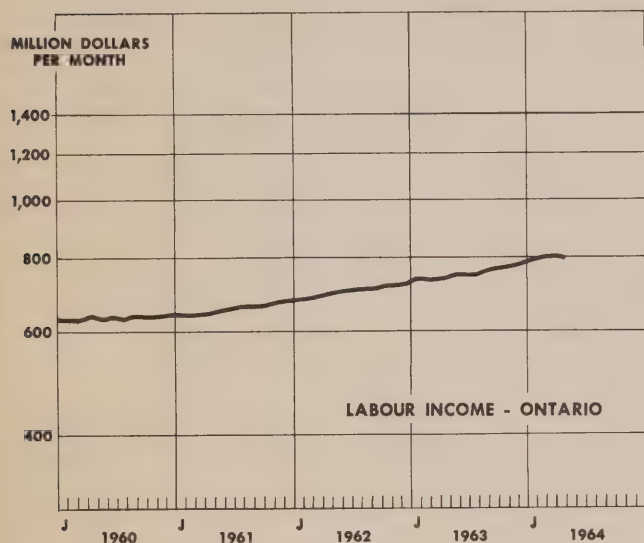
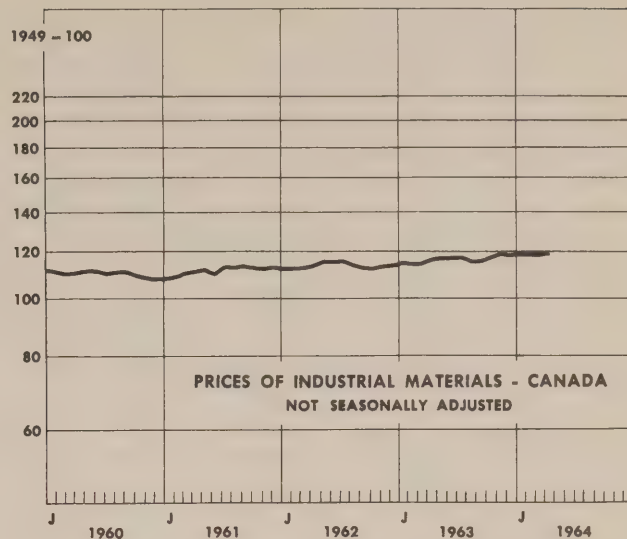
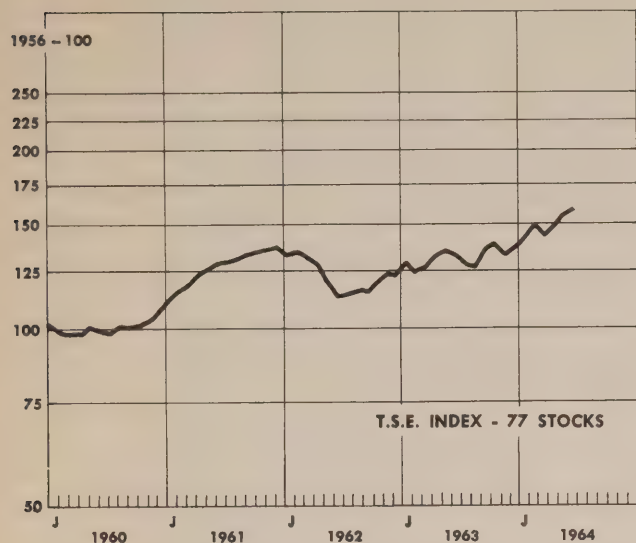
<sup>1</sup>This is a finding of a survey carried out by the Department of Municipal Affairs.

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED





# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES

ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED  
(\* Figures for Canada)

LEADING INDICATORS

----- 1963 ----- 1964 -----  
May    June    July    August    September    October    November    December    January    February    March    April    May    June

Average Weekly Hours Worked in														
Manufacturing	(No.)	41.1	40.7	40.7	40.6	40.8	40.9	41.5	40.6	41.6	41.4	40.9	75	
Business Failures - Number		110	103	87	84	98	97	92	103	73	81	61	80	
Business Failures - Liabilities	\$ 000	9,038	9,379	4,135	3,606	6,902	4,473	5,139	5,194	3,493	1,574	2,194	11,965	
Business Failures in Manufacturing*	\$ Million	2,413	2,383	2,396	2,421	2,511	2,518	2,501	2,629	2,676	2,560	2,600		
New Orders in Manufacturing*	1956=100	135.1	133.8	128.2	127.1	135.9	138.0	133.1	136.1	140.5	138.7	143.3	155.3	158.9
T.S.E. Index - 77 Stocks	(No.)	4,530	3,718	4,361	4,219	3,624	4,421	3,399	5,694	5,470	4,899	3,676	4,136	
New Dwelling Unit Starts	\$ Million	31.9	42.9	35.4	32.7	43.6	53.8	45.4	60.8	94.5	58.8	51.5	80.0	40.1
Housing Contracts														
Business, Industrial and Engineering														
Contracts	\$ Million	76.0	60.2	94.5	94.9	61.7	89.1	112.6	64.9	95.5	78.8	60.1	130.3	81.5
Money Supply*		15,771	15,957	16,091	16,081	16,165	16,434	16,522	16,612	16,797	16,759	16,863	17,003	17,095

COINCIDENTAL AND LAGGING INDICATORS

Gross National Product*	\$ Million	- - -	42,520	- - -	- - -	43,076	- - -	- - -	44,332	- - -	- - -	45,512	- - -	- - -
Total Industrial Production*	1949=100	194.7	195.1	191.9	194.9	198.1	200.2	203.5	207.7	210.8	212.3	210.2	215.1	
Total Manufacturing		173.1	173.3	170.5	173.4	175.4	177.4	180.2	183.5	185.2	188.6	186.3	190.2	
Non-Durables		171.9	172.7	170.1	173.8	173.7	175.2	175.9	180.1	179.7	184.2	180.1	185.1	
Durables		174.5	173.9	170.9	172.9	177.4	179.9	185.2	187.6	191.6	193.8	193.6	196.2	
Mining		293.4	294.8	281.5	289.4	300.8	303.0	305.1	311.8	335.2	324.9	317.3	324.9	
Electric Power & Gas Utilities		358.6	361.3	370.8	365.9	372.8	376.3	390.6	403.8	391.2	384.3	396.4	411.8	
Cheques Cashied in Clearing														
Centres	\$ Million	3,235	3,280	3,084	3,220	3,236	3,269	3,301	3,278	3,470	3,763	3,754	3,540	
Retail Trade	\$ Million	568	577	548	594	560	566	597	599	612	600	603	584	621
Labour Income	\$ Million	742	745	745	759	761	767	771	781	790	795	800	798	
Labour Force	000's	2,444	2,484	2,483	2,479	2,474	2,489	2,490	2,512	2,490	2,492	2,521	2,513	2,583
Employed	000's	2,348	2,358	2,384	2,390	2,388	2,397	2,403	2,430	2,420	2,435	2,462	2,440	2,457
Unemployed	000's	96	126	99	89	86	92	87	82	70	57	59	73	126
Unemployed as % of Labour Force	%	3.9	5.1	4.0	3.6	3.5	3.7	3.5	3.3	2.8	2.3	2.3	2.9	4.9
Industrial Employment	1949=100	125.9	126.3	125.3	127.1	128.2	128.3	129.2	129.8	130.7	131.5	132.1	131.6	
Average Hourly Earnings in Manufacturing	\$	2.04	2.04	2.04	2.05	2.07	2.07	2.09	2.10	2.09	2.09	2.11		
Primary Energy Demand - OHPC	EHWH	37.14	37.15	37.83	37.78	37.84	37.92	38.34	39.85	39.84	38.97	39.88	41.25	40.98
New Dwelling Unit Completions	(No.)	2,602	2,620	3,277	3,382	3,318	3,652	2,879	3,050	2,641	4,495	10,184	6,240	

ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED

Prices, Industrial Materials*	1935-39=100	254.8	254.9	255.3	251.4	251.0	254.9	258.8	257.5	259.5	258.6	257.1	258.8	259.6
Domestic Exports*	\$ Million	647.8	515.7	592.8	543.2	586.9	624.7	670.4	638.9	619.0	534.2	583.0	651.4	
Imports for Consumption*	\$ Million	609.3	532.9	585.2	525.5	542.7	620.1	618.4	563.1	571.4	514.2	578.1	709.4	
Foreign Exchange Reserves*	\$ Million U.S.	2,712	2,692	2,501	2,471	2,568	2,581	2,631	2,595	2,582	2,542	2,466	2,481	2,509



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# ONTARIO ECONOMIC REVIEW

DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. S. J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*





# THE ONTARIO ECONOMY

After a sharp rise in June, the rate of unemployment in Ontario declined in July to under 4% on a seasonally adjusted basis, primarily as a result of increased employment. Construction activity increased markedly in July. Indicative of the stability of this expansion is the minimal activity in the price index of industrial materials. Canadian exports in June rose sharply to a record level of over \$¾ billion.

## PRODUCTION

The Canadian seasonally adjusted index of industrial production stood at 209.3 in May. Though this is below the record April level of 215.2, it is over 7% more than in May, 1963. The manufacture of both durables and non-durables fell 3% from April levels. In the durable goods sector, production of transportation equipment fell almost 10% and primary steel production was off 2%. The non-metallic mineral products and wood products industries showed declines of 7% and 4% respectively. Small gains were made in non-ferrous metal products and electrical apparatus and supplies.

The most notable changes in the non-durable goods sector were declines in the production of textiles and clothing 6%, petroleum products 7% and rubber 9%.

May mining production showed little overall change from April. Three percent declines took place in metals and non-metals. The mining of iron ore, zinc and lead showed the greatest declines. Offsetting this was a rise in the production of fuels.

Based on 1949 = 100, the seasonally adjusted May index for electric power and gas utilities was 384.5, representing a decline of a little more than 6% from the record level of April.

Though the latest national production index is for May, several isolated reports are available for later months. Steel production reports covering seven months indicate this may be a record year. July production of steel ingots was 11% higher than that of July last year. In the same period, pig iron production was 3% higher. The production of automobiles and trucks was slightly lower this July than in July, 1963, compared with the fact that total production in the first seven months of all motor vehicles was 17.8% above that of the same period last year.

## CONSTRUCTION

Though not equal to the record levels of April, the Ontario values of housing contracts and business, industrial and engineering contracts awarded

in July were well above June and May levels. Business, industrial and engineering contracts exceeded \$100 million, on a seasonally adjusted basis, for the fourth time in 12 months. The number of dwelling unit starts in the first six months in Ontario was 14% above the same period last year. Of the 27,912 starts in the first half of 1964 (24,477 in the first half of 1963), the larger cities had the following shares: Metro Toronto census area 13,912 (12,286), Hamilton 3,072 (2,007), Ottawa 2,242 (3,091), Kitchener 1,756 (1,171) and London 1,354 (1,213).

A description of some of the more significant construction projects recently awarded in Ontario appears below in tabular form.

### LARGE CONSTRUCTION AWARDS PLACED RECENTLY IN ONTARIO

<i>City</i>	<i>Value (\$000's)</i>	<i>Description</i>
Brantford	465	New offices and warehouse for Agnew - Surpass Shoe Stores Ltd.
Hamilton district	742	Grading, drainage, and hot mix paving for Ontario Highways.
Kitchener	660	Motor hotel (three - storey — 185 ft. by 112 ft.).
London	900	Northcliffe Towers Ltd. — a 12-storey, 130-suite apartment building.
Oakville	451	Office building for Agri Holdings Ltd.
Oakville	450	Two-bay garage for town of Oakville.
Oshawa	486	100-bed extension to home for aged (Hillsdale Manor).
Riverside	1,000	A 12-storey apartment building for Prueffer Co. Ltd.
St. Thomas	961	Hospital unit for St. Thomas, Elgin Hospital.
Toronto	1,700	Apartment building project on Jane St. and Wilson Ave.
Toronto	928	Office and warehouse additions for Canadian Hanson and Van Winkle Co. Ltd.
Woodstock	1,985	Dam work for Upper Thames River Conservation Authority.

## EMPLOYMENT AND INCOME

The July Ontario labour force numbered 2,583 thousand on a seasonally adjusted basis, virtually the same as that of June. The number of people employed increased to 2,487 thousand from the June figure of 2,457 thousand with the net result that unemployment dropped. The seasonally adjusted rate of unemployment for Ontario was 3.7% in July.

In most industries, the outlook was one of shortage of trained and experienced workers. The forestry industry continued to suffer an acute shortage of power saw operators and less intense shortages of cutters, edgermen and sawers. The mining industry experienced the same employment situation as last month—full employment in the quarrying, sand and gravel pit operations, increased employment in silver and iron ore mining, and decreased employment in gold mining. The agricultural sector of the economy displayed a mixed employment picture. Extra help required to harvest a wide variety of vegetables has partially offset declines in the number of seasonal jobs on tobacco farms.

A seasonal shortage of workers in meat packing, food canning and soft drink production caused many operators to hire students. An approximate labour balance existed in the processing of tobacco, the manufacture of boots and shoes, and in the production of textiles. One exception was the continued demand for skilled sewing machine operators in the clothing sector. Spurred by a record construction year, the iron and steel concerns operated at full production levels. Employment in fabricated and structural steel, primary steel, heavy machinery, store and office machinery and sheet metal for cans were all at high levels. The only layoffs of any significance were in the production of hardware and tools. There were customary layoffs for model change-overs in the car industry, but there were still shortages of some categories of skilled machine tradesmen required for work both during and after the change-overs.

A shortage of skilled personnel continued to exist in the construction industry. Particularly in demand were experienced journeymen, machine operators and rock drillers. The trade sectors, both wholesale and retail, remained fairly stable. The finance, insurance and real estate sectors displayed a continuous shortage of qualified people. Banks and insurance companies were both concerned over the lack of Grade 13 applicants.

## SALES

Canadian department store sales picked up vigorously in July and were valued at 14.2% above those of July last year. Ontario and British Columbia con-

tributed the largest percentage increases: 17.4% and 17.7% respectively. Chain store data are not yet available for July, but June chain store sales in Canada were 3.2% above June, 1963. Detailed reports of retail trade in Ontario indicate that for the first five months, total sales from all types of stores were valued at \$2,889 million. This was 6.4% higher than for the comparable period last year. Several components showed gains of over 10%, e.g., lumber and building materials (25.4%), variety goods (14.3%), department store goods (11.1%), and motor vehicles (10.0%).

Much of this year's increased buying is on credit. Credit outstanding on personal loans from chartered banks has increased sharply this year. In May, 1964, fully secured loans and other non-home improvement loans in Canada were 21.1% and 23.8% above May of last year. Some of this may reflect a switch to bank financing for new cars since credit extended by sales finance companies on new passenger cars rose only 2.3% above May, 1963. In fact, finance company credit on new cars in Ontario fell 8.4% from May last year. On new commercial vehicles the corresponding drop was 16.7%.

## PRICES

Based on 1949 = 100, the Canadian consumer price index stood at 136.2 in July, 1964. This is 2.0% above that of July, 1963, which is less than the average annual increase for the last fifteen years. The increase of 0.7% from June of this year was due to increases in the prices of food, housing and recreation and reading. Transportation prices declined fractionally whereas the prices of other components—namely clothing, health and personal care, and tobacco and alcohol—remained virtually constant.

The wholesale price index for industrial materials stood at 259.2 this July (1935-39 = 100), reflecting an increase of 1.6% over July, 1963. The price index for Canadian farm products actually showed a 7.7% decline from July, 1963. Based also on 1935-39 = 100, it stood at 223.7 in July, 1964.

## FINANCE

A slight tightening in the supply of loanable funds on the Canadian money market became particularly evident towards the end of July. The total money supply in Canada which had reached a level of \$17,487 million by mid-month subsequently contracted to close the month at \$17,396 million. An indication of the pressure on the market was that of the day-to-day loan rate quotation; it opened the month at a level of 3% and closed at 3¾%.

Light trading volume and minor price fluctuations characterized activity on Canadian bond markets



throughout July. In general, downward price correction occurred in all sections of the markets. Short-term issues were off 10 to 15 cents over the month and longer-termed maturities registered losses of some 25 cents on average. New Canadian bond financing for the first seven months of 1964 totalled \$1.97 billion, a decrease of 10.6% from last year's comparable total of \$2.20 billion. July's supply of new issues was highlighted by a \$50 million Quebec Autoroutes Authority (fully guaranteed by the Province of Quebec) 5¾% 25 year bond issue priced to yield 5.81%.

Investment quality industrial equities listed on the Canadian stock exchanges continued to be in good demand throughout most of the month. Price changes were generally confined to a narrow range with 1964 highs being recorded mainly at mid-month. As measured by the Toronto Stock Exchange Industrial Index, the advance carried this representative average to consecutive all-time closing highs through July 20th when it attained a closing level of 160.82. Thereafter, the Index held steady to slightly lower, closing the month at a level of 160.18.

Canada's foreign exchange reserves (official holdings of gold and U.S. dollars) experienced no change throughout July, and thus ended the month at the June closing level of \$2,533.9 million.

The value of the Canadian dollar in terms of U.S. funds weakened fractionally during the first two weeks of July. This pressure essentially arose out of the increased demand for foreign currency by Canadians, added imports and payment of dividends to

foreigners, as well as the smaller than normal inflow of funds from exports. However, a recovery was evident by the end of the month when the Canadian dollar was quoted at 92.55 cents.

#### FOREIGN TRADE

Exports in June rose to an incredible \$¾ billion, an increase of 44% over June, 1963. At this level, total exports for the whole year may exceed \$8 billion in spite of anticipated declines in wheat sales to the Soviet Union during the second half. For the first six months, exports amounted to \$3,833.7 million, an increase of 22% over the same period last year. Though this increase was due largely to exceptional wheat sales to the Soviet Union, it is highly significant that the exports of inedible manufactured products rose 40.4% to a six month total of \$534.3 million. Among important manufactured exports showing large increases were combines and threshers (\$26.8 million in the first half of 1964), locomotives and engines (\$16.6 million), passenger auto chassis (\$34.7 million), motor vehicle engines and parts (\$11.5 million), road motor vehicle parts (\$24.7 million), aircraft, complete and engines (\$73.4 million) and navigation instruments and apparatus (\$26.4 million).

It is worth noting that the average price index for total exports during the first half of this year was only 0.7% higher than in the same period last year. Thus, virtually all increases in exports are gains in volume of trade.

## THE DEVELOPMENT OF FORESTRY POLICY

MR. A. J. HERRIDGE, *B.Sc.F., R.P.F.*

*Supervisor, Silviculture Section, Timber Branch*

ONTARIO DEPARTMENT OF LANDS AND FORESTS

The development of forestry policy in Canada has moved through several stages during the past three hundred years: exploitation, revenue-raising, protection and assuring supply. Each successive stage has required increased public expenditure, and forestry problems have now reached the stage where large public investment is required.

#### THE PERIOD OF EXPLOITATION

In what is now Eastern Canada it is most likely that the earliest public expenditures related to the forests were concerned with the policing and administration of reservations of timber required for

shipbuilding. As early as 1683, land grants made in what is now the Province of Quebec contained a clause which reserved "the oak timber fit for building of vessels". From time to time, permission was granted to cut trees, which had been inspected and marked, for purposes of shipbuilding. Policing was required to prevent persons from cutting reserved oak and to prevent the cutting of trees on ungranted lands or property not belonging to them.

After the British took possession of the colony in 1763, the interest of the Home Government in the forests of Canada was the necessity of preserving timber for the same purposes which were regarded

as important by the French. Methods of accomplishing their objective included, in addition to the reservations on individual land grants, the setting out of Forest Reserves. These Reserves were woodlands fit for the production of naval timber. It is interesting to note the broadening in species preference (to include pine as well as oak) which occurred in the latter part of the 18th century. Policing of the Forest Reserves was mainly concerned with the prevention and detection of trespass on the Reserves.

Licences to cut in the Canadian forests were granted by the British Government to the contractors for the Royal Dockyards. In addition to filling their contracts, the selected sub-contractors in Canada took advantage of the privilege afforded them by also carrying out general lumbering business to supply the British markets. There was not an equal opportunity for others to enter into this developing business of timber export. Nor was there any financial return to the public for the timber cut off publicly-owned lands since the operation was allegedly established to supply timber for naval purposes.

The latter part of the 18th century and the early 1800's saw a tremendous increase in the volume of timber cut and exported to British markets. Increasing amounts of timber were coming from farther and farther inland, as is reflected in the next form of government expenditure in forestry. This expenditure stemmed from a concern for the safety of persons navigating scows of timber, coming from Upper Canada, through rapids in the St. Lawrence River, upstream from Montreal.

Inspectors were appointed with the responsibilities of being familiar with the water levels in the rapids, determining the amount of water drawn by the scows, and measuring the amount of the various products on board the scow. These persons were titled Inspectors or Measurers.

In the years following the enactment of the legislation providing for these Measurers, the government recognized the need to improve navigation on the St. Lawrence, and amended the legislation to provide for the levying of a charge on the material moved through the rapids, the revenue so raised being used for navigational improvements.

As the economy became increasingly dependent upon timber exports, an act was passed late in 1808 providing for the inspection of the quality of the timber being exported, apparently in an endeavour to preserve a favourable overseas image of Canadian lumber. These Inspectors became known as Cullers, and as the grading of lumber became more complex the Cullers were required to obtain licences.

#### THE REVENUE-RAISING PERIOD

As the importance of timber and lumber exports increased, and administration and navigational expenditures became more costly, the government recognized a need not only that the industry be further developed but that it also contribute more towards meeting these expenses and to general revenue. In 1827, the government established a system of public auctions to dispose of timber on Crown Lands. The system went through various modifications during the nineteenth century, but essentially the expenditures on forestry were concerned with administration of the licensing program and the measurement of the wood cut in order to collect revenue.

#### PROTECTION AGAINST FIRE

The next stage of development in expenditures related to forestry in Ontario reflected recognition of a need to prevent and control forest fires. Available records indicate that extensive forest fires occurred in Northern Ontario even prior to the arrival of the white man. In 1878, legislation was enacted concerning the protection of the forest from fires, but it was not effective. In 1885 lumbermen were asked by the government to nominate rangers to patrol their limits, with the costs being shared equally between the company and government. In 1897, following a series of fires that caused serious loss of life, the government placed twelve men on its payroll with the responsibility of patrolling unlicensed Crown Lands. From these modest beginnings, annual expenditure in forest protection has increased to the current level of approximately six million dollars.

#### REPAIRING RAVAGES AND ENSURING SUPPLY

By the twentieth century, government began to recognize the consequences of exploitation in the presence of denuded idle land and of blow sand areas in Southern Ontario, and attention broadened from concentration on exploitation, protection and revenue to include replacement. In 1905, a tree nursery was established at the Ontario Agricultural College at Guelph. Initially the trees produced at this nursery were used to reforest the denuded idle lands and blow sand areas. Through time, and as increasing numbers of trees became available, planting operations moved north. The tasks of protection and replacement have sometimes in the past offered opportunities to relieve unemployment and to rehabilitate inmates. The replacement program has evolved to the present capacity for planting some forty million trees on Crown Lands in Northern Ontario and for the sale of an additional twelve million trees to private landowners, largely in



Southern Ontario. The cost of producing and planting these trees is of the order of two and a half million dollars annually.

#### RECENT DEVELOPMENT

Forestry policy has evolved from plain exploitation, through revenue-raising, to protection and then replacement, and now is entering a complex phase in which the forests are regarded as an asset that is basic to endeavours to achieve several desirable economic objectives. Increasingly, our society is allocating resources for forest management that will provide for forest and soil conservation, conversion of abandoned or marginal agricultural land, and recreation. There is one area, however, in which the forest management program still lags behind requirements, and that is in efforts directed at securing and optimizing long-range yields of forest products to ensure preservation of our share of world markets.

This area differs from the objects of policy in the past and from other current objectives in that it produces more indirect and long-range benefits, and this introduces two complications: a) It is difficult to determine the optimum investment for these purposes and, b) It is also difficult to obtain support for specific objectives that are so long-range.

In other words, although most informed people would accept this objective in principle, in practice it is difficult to ascertain the optimum locations and the optimum investment in the aggregate and in each location, and it is difficult to obtain support for specific projects when the returns are uncertain, and long-range.

Economists have been attempting to achieve more precision in these matters through development of techniques of cost-benefit analysis, but this approach continues to place considerable reliance on judgment through several phases of each analysis.

This situation produces considerable frustration for the professional forester. Through his many years of experience he has become aware of the many ways in which society could benefit from more sophisticated and broader forestry policies. When he advances his proposals, he is asked to prove the

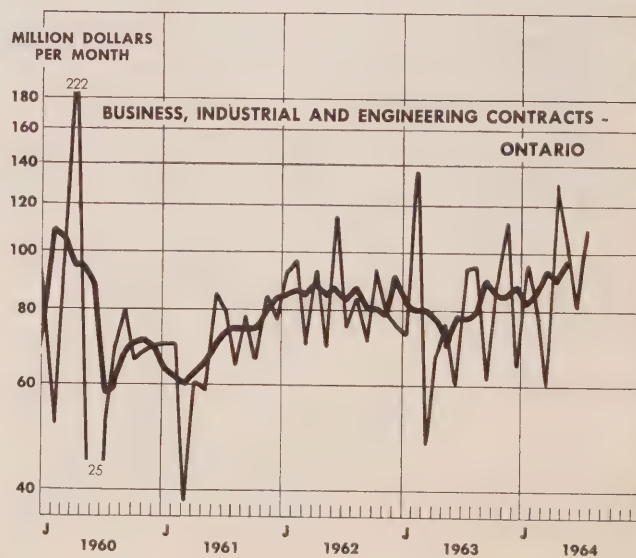
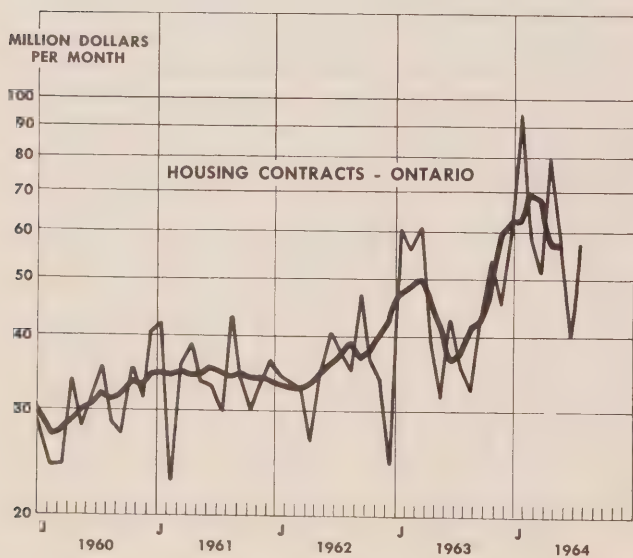
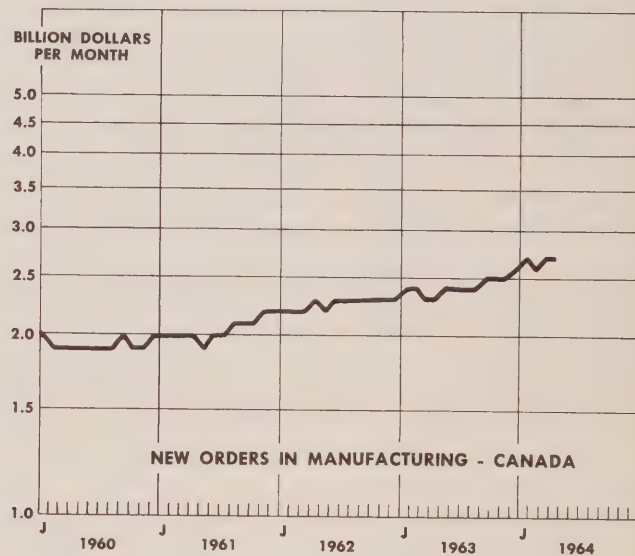
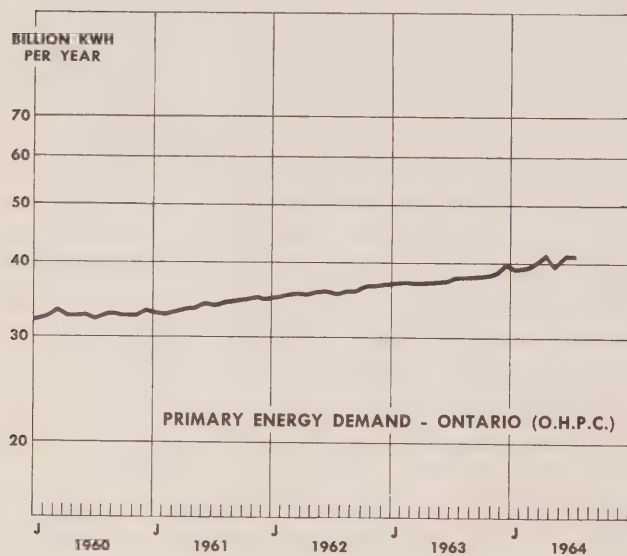
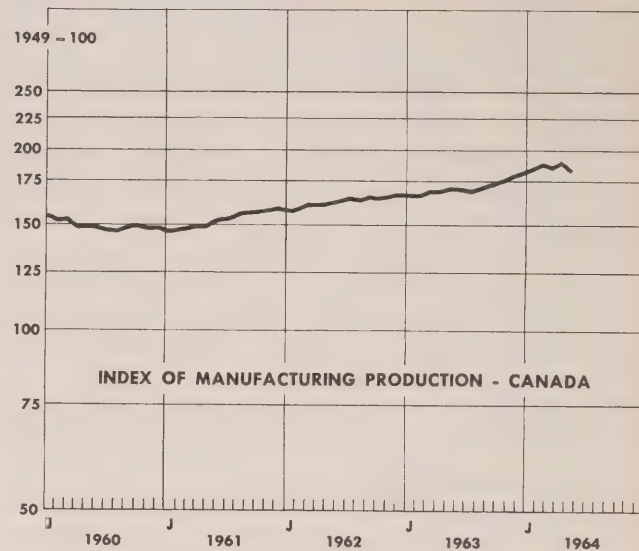
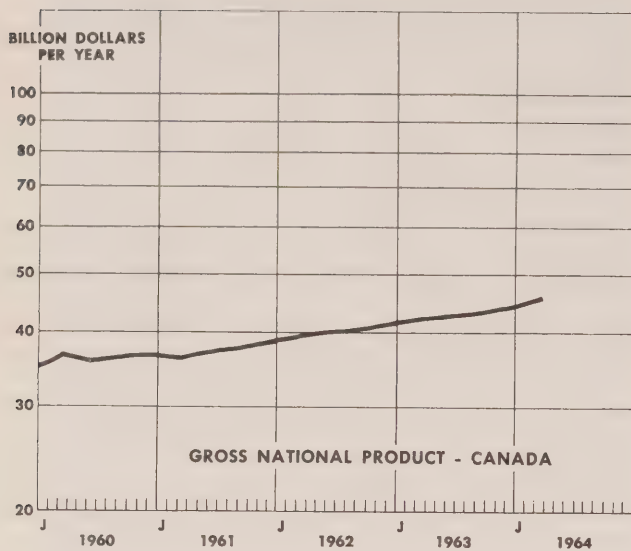
economic yield from his proposed investments, yet the economists have not provided him with all the tools necessary for designing definitive answers to such questions.

However, the professional forester is not without hope. He has witnessed the growing articulation of development in forestry policy and the acceptance of programs of the ARDA type. He has seen society adopting other policies supporting control of air and water pollution, space exploration, and even research and development in general, and many others for which the inability to provide specific proof of the rate of economic return on investment has not been an insuperable obstacle. As a further example, he has wholeheartedly approved of society's decision to allocate tremendous resources to education, despite the fact that economists have been unable to provide definitive proof of the rate of economic return on such investment.

All of these programs meet the same two economic obstacles as modern forestry in that it is difficult to determine the optimum investment pattern and total, and the public is confused regarding prospective results that are indirect and long-range. It is becoming increasingly obvious that space and research and development projects and education, as well as other government activities, must be evaluated and planned in terms of economic need, methods, impact and resources, and the professional forester is also obliged to utilize every technique available in an attempt to ensure that he advances only the most sound proposals.

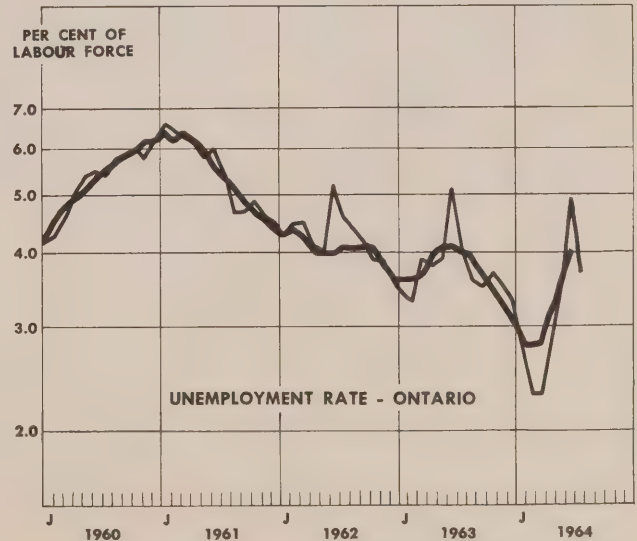
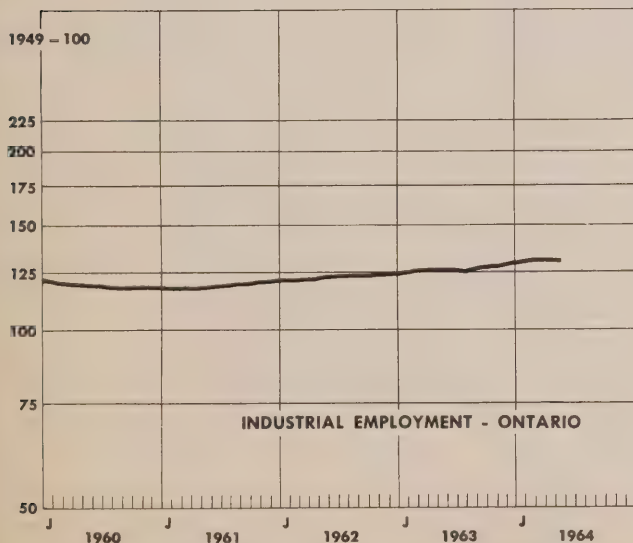
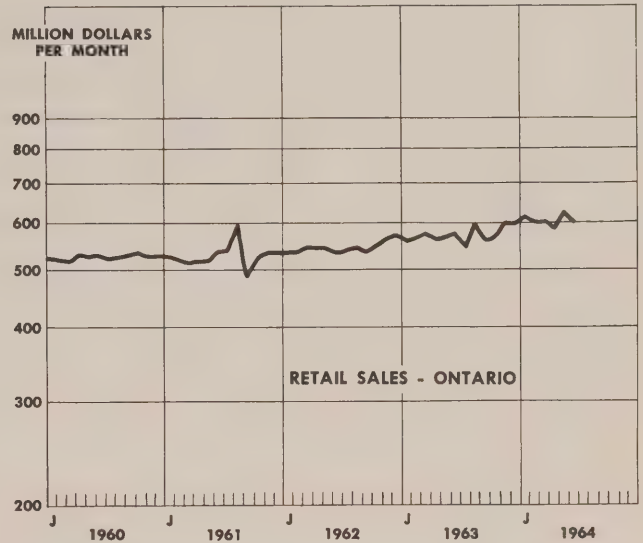
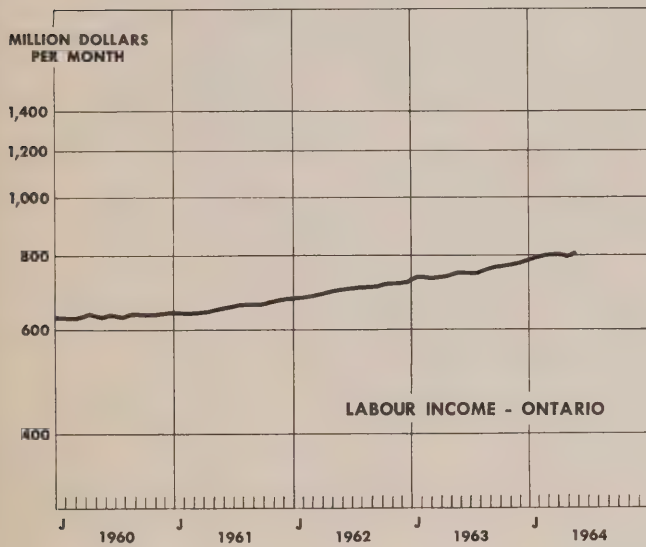
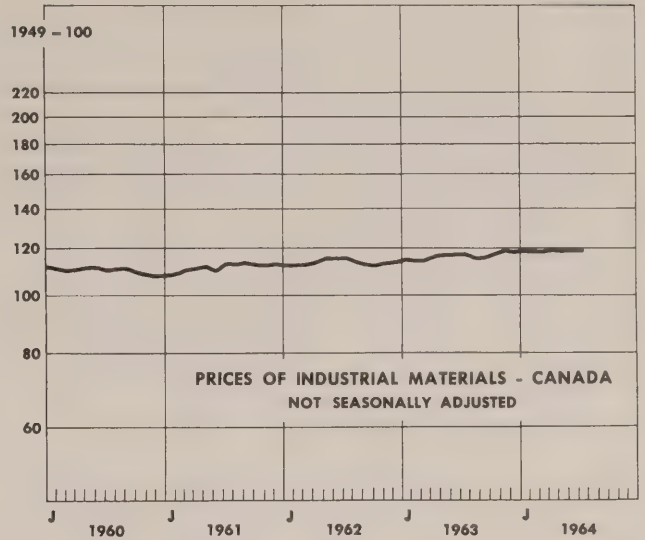
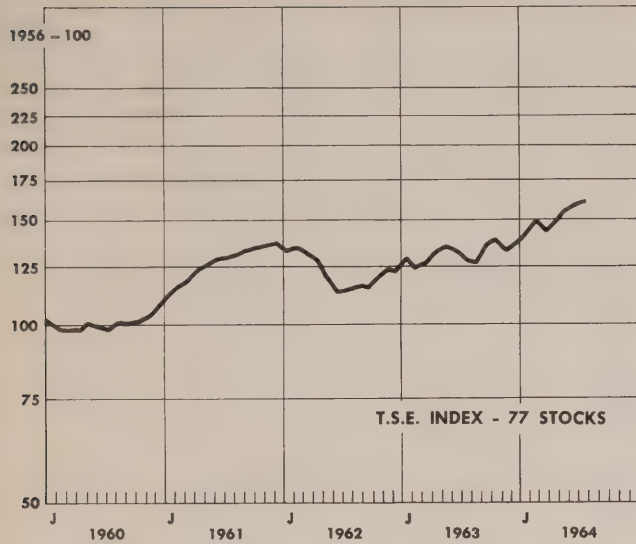
In the last analysis, the evolution of forestry policy, as in other areas of government policy, will depend upon growing public awareness of the importance of the problems, upon the ability to recognize indirect and long-range potentials, and upon the willingness to support modern, sophisticated approaches. The extent of progress in this form of understanding will determine the degree to which we shall ensure an adequate supply of high quality assets (such as in forestry) that are fundamental to our prospects for future health and prosperity.

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED





# ECONOMIC INDICATORS — SEASONALLY ADJUSTED



— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES

ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED  
(\* Figures for Canada)

LEADING INDICATORS															
		June	July	August	September	October	November	December	January	February	March	April	May	June	July
1964															
Average Weekly Hours Worked in Manufacturing	(No.)	40.7	40.7	40.6	40.8	40.9	41.5	40.6	41.6	41.4	40.9	41.3	41.5		
Business Failures - Number	\$ 000	103	87	84	98	97	92	103	73	81	61	75	80	102	
Business Failures - Liabilities	\$ Million	9,379	4,135	3,606	6,902	4,473	5,139	5,194	3,493	1,574	2,194	6,754	11,965	12,832	
New Orders in Manufacturing*	1956=100	2,383	2,396	2,421	2,511	2,518	2,501	2,629	2,676	2,560	2,699	2,707	155.3	158.9	160.5
T.S.E. Index - 77 Stocks	(No.)	133.8	128.2	127.1	135.9	138.0	133.1	136.1	140.5	138.7	143.3	148.6	155.3	158.9	160.5
New Dwelling Units Starts	\$ Million	3,718	4,361	4,219	3,624	4,421	3,399	5,694	5,470	4,899	3,676	4,136	4,087		
Housing Contracts		42.9	35.4	32.7	43.6	53.8	45.4	60.8	94.5	58.8	51.5	80.0	56.9	40.1	57.6
Business, Industrial and Engineering Contracts	\$ Million	60.2	94.5	94.9	61.7	89.1	112.6	64.9	95.5	78.8	60.1	130.3	104.9	81.5	109.6
Money Supply*		15,957	16,091	16,081	16,165	16,434	16,522	16,612	16,797	16,758	16,863	17,003	17,095	17,213	17,385
COINCIDENTAL AND LAGGING INDICATORS															
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Total Industrial Production*	1949=100	195.1	191.9	194.9	198.1	200.2	203.5	207.7	210.8	212.3	210.2	215.2	209.3		
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Non-Durables		172.7	170.1	173.8	173.7	175.2	175.9	180.1	179.7	184.2	180.1	185.8	180.4		
Durables		173.9	170.9	172.9	177.4	179.9	185.2	187.6	179.9	193.8	193.6	196.1	190.5		
Mining		294.8	281.5	289.4	300.8	303.0	305.1	311.8	335.2	324.9	317.3	324.0	324.6		
Electric Power & Gas Utilities		361.3	370.8	365.9	372.8	376.3	390.6	403.8	391.2	384.3	396.4	409.3	384.5		
Cheques Cashied in Clearing	\$ Million	3,280	3,084	3,220	3,236	3,269	3,301	3,278	3,470	3,763	3,754	3,540	3,705	602	
Centres	\$ Million	577	548	594	560	566	597	599	612	600	603	584	621		
Retail Trade	\$ Million	745	745	759	761	767	771	781	790	795	800	798	802		
Labour Income	000's	2,484	2,483	2,479	2,474	2,489	2,490	2,512	2,490	2,492	2,521	2,513	2,530	2,583	2,582
Labour Force	000's	2,358	2,384	2,390	2,388	2,397	2,403	2,430	2,420	2,435	2,462	2,440	2,442	2,457	2,487
Employed	000's	126	99	89	86	92	87	82	70	57	59	73	88	126	95
Unemployed															
Unemployed as % of Labour Force	%	5.1	4.0	3.6	3.5	3.7	3.5	3.3	2.8	2.3	2.3	2.9	3.5	4.9	3.7
Industrial Employment	1949=100	126.3	125.3	127.1	128.2	128.3	129.2	129.8	130.7	131.5	132.1	131.5	131.3		
Average Hourly Earnings in Manufacturing	\$	2.04	2.04	2.05	2.07	2.07	2.09	2.10	2.09	2.09	2.11	2.10	2.11		
Primary Energy Demand - OHPC	EXWH	37.15	37.83	37.78	37.84	37.92	38.34	39.85	38.84	38.97	39.88	41.25	39.33	40.98	41.01
New Dwelling Unit Completions	(No.)	2,620	3,277	3,382	3,318	3,652	2,879	3,050	2,641	4,495	10,184	6,240	3,454		
ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED															
Prices, Industrial Materials*	1935-39=100	254.9	255.1	251.4	251.0	254.9	258.8	257.5	259.5	258.6	257.1	258.8	258.7	257.8	259.2
Domestic Exports*	\$ Million	515.7	592.8	543.2	586.9	624.7	670.4	638.9	619.0	534.2	583.0	651.4	670.5		
Imports for Consumption*	\$ Million	532.9	585.2	525.5	542.7	620.1	618.4	563.1	569.9	514.2	578.1	709.4			
Foreign Exchange Reserves*	\$ Million U.S.	2,692	2,501	2,471	2,568	2,581	2,631	2,595	2,582	2,542	2,466	2,481	2,509	2,534	2,534





# ONTARIO ECONOMIC REVIEW



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*Hon. S. J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*





# THE ONTARIO ECONOMY

After opening the year with a strong first quarter the economy paused during the second and seems to have picked up somewhat in the third quarter. While industrial production remains high, it has been tending to fluctuate around a plateau. Ontario unemployment in August dropped to the lowest August level since 1956. Though prices have remained fairly steady through the first seven months of 1964, the industrial materials price index moved up sharply in August. Externally, the export sector remains strong but imports are assuming increasing prominence and the current account deficit appears likely to widen. The exchange value of the Canadian dollar has strengthened in August.

## PRODUCTION

At the end of the second quarter the seasonally adjusted index of Canadian industrial production stood at 210.8 — up almost 10% over the second quarter figure for 1963. However, the index has shown a mixed trend over the first six months of 1964. Advances in the index in February, April and June have been balanced by declines in March and May so that the .08% rise in the June index returns it to the level reached in January, 1964.

The spotty half-yearly performance of the industrial production index was echoed in miniature in June in the index components. Non-durable manufacturing rose 1.1% over the May level largely owing to increased production of clothing (12.6%) and gains ranging from 2% to 4% in textiles, tobacco, rubber, petroleum refining and chemicals. Declines averaging 3.1% were registered in food and beverages, printing and publishing and leather products.

In contrast to the gain in non-durables, the durable production index in June declined by just over 1% from the month previous on a seasonally adjusted basis. Gains of 2% in transportation equipment and 3% in non-ferrous metal products and non-metallic mineral products were more than offset by declines in wood products (7%), iron and steel products (2.7%), and electrical apparatus and supplies (4%).

Motor vehicle production almost all of which is located in Ontario continues to represent a buoyant stimulus to the provincial economy. While not too much significance can be attached to August production figures which are normally low reflecting model change-overs and production adjustments, the August, 1964, production of all types of units was ahead of last year. Early reports on September

production also indicate strength. On the calendar year to date (end of August), motor vehicle production is up 19% over 1963 to a total of 470,375 units and one industry expert is predicting total 1964 sales of some 715,000 vehicles.

Symptomatic of the industry's belief in a continuing trend of high motor vehicle production and sales is the recent announcement of the construction of a new \$25 million truck assembly plant at Oakville by the Ford Motor Company. It is expected that about 500 new jobs will be generated by this plant.

While it is far too early yet to assess the direct significance of recent contract negotiations in the American automotive industry the possibility of a major labour dispute in Canada cannot be ruled out entirely. Contracts in the Canadian industry are under discussion now and the future pace of the industry will in large part be dependent on the course of these negotiations.

In Ontario the estimated value of manufacturing shipments in June rose to almost \$1.38 billion. This brings total shipments to \$7.88 billion for the January-June, 1964, period. This is 11% above the comparable period of 1963.

For the second month in a row iron and steel production has shown moderate increases over the same month of last year reflecting current strength in the automotive and construction industries. August production of steel ingots and pig iron has risen 9.8% and 5.1% respectively over August, 1963. For the first 8 months of 1964, production of iron and steel is up 13.5% and 11% over the comparable period of 1963. More than 80% of Canada's productive capacity in primary iron and steel is located in Ontario and increases in these industries provide a strong stimulant to the provincial economy.

## CONSTRUCTION

The seasonally adjusted value of housing contracts in Ontario declined in August from July levels. The August figure of \$44.9 million is down 28% from July of this year, and is almost 40% off the January-July monthly average of \$62.8 million on a seasonally adjusted basis. Business, industrial and engineering contracts though down 12.4% from July, 1964, to \$97.5 million (seasonally adjusted) remain 3.3% above the January-July, 1964, monthly average of \$94.4 million. Ontario's share of total Canadian business, industrial and engineering contracts has risen from 33.4% in January, 1964, to 39.7% in August.

The Province of Ontario announced recently that

it will build a \$5 million Museum of Science and Technology at the intersection of Don Mills and Eglinton in Metro Toronto. This followed, in less than a month, previous announcements of a \$10 million high-rise office complex for Olympia and York Development Associates, and a \$7 million head office for International Business Machines at the same intersection. Of considerable importance to the construction industry and the residents of Ontario was the Province's announcement in late August of the intended construction of a \$266 million nuclear power plant at Fairport just east of Toronto. The new plant scheduled for operation in 1970 will eventually have a capacity of 1 million kilowatts and is expected to employ up to 900 during the construction phase and 140 on a regular basis once completed.

The Federal Government has announced that the winter incentive program for housing will commence on November 15th of this year. Houses begun between November 15th, and March 31st, 1965, will qualify for the \$500 Federal subsidy. The bonus along with the fact that the final 3% of the 11% Federal sales tax on machinery and building materials comes into effect on January 1, 1965, is expected to produce considerable construction activity this fall. The table below lists some of the more important construction projects awarded recently.

#### EMPLOYMENT

The seasonally adjusted Ontario labour force declined from 2,582 thousand in July to 2,574 thousand in August. Employment increased fractionally to 2,488 thousand from the July figure of 2,477 thousand. The net result was a decline in the August rate of unemployment to 3.3% on a seasonally adjusted basis (July 3.7%).

Total labour income in Ontario continued to rise. The seasonally adjusted June figure of \$807 million (latest available) represents a rise of 0.5% above the May, 1964, figure and 2.2% over January, 1964. Over

the first half of 1964, employment has increased 1.5% on a seasonally adjusted basis. As a result, income per person employed has risen 0.6% compared with a rise of 0.8% in the consumer price index.

#### SALES

For the first seven months of 1964 Ontario retail sales (unadjusted) were up 6.4% over the same period of 1963. The categories of retail trade showing the greatest strength in the period were department, variety, lumber and building materials. Department store sales alone increased by 11.9% in the same period. One outstanding characteristic of retail sales so far this year has been the rapid rise of consumer credit, particularly that provided by chartered banks.

#### PRICES

A slight easing (0.1%) in the Canadian consumer price index occurred in August and based on 1949 = 100 it stood at 136.1. Increased summer marketing of local fruit and vegetables served to bring about a dip of 0.2% in the food index. For the second month in a row, price levels in such components of the index as recreation and reading, tobacco and alcohol, and housing remained constant. Fractional price declines were registered in transportation (new cars) and clothing (men's and children's wear), while costs of health and personal care eased slightly upward (drugs and prescriptions).

Regional farm prices in eastern Canada declined by 3% from July levels while western Canadian farm prices inched upwards by 1%. The composite index for Canadian farm products in August stood at 220.9 based on 1935-39 = 100, down 1.3% from July of this year.

In contrast to the index declines for consumer and farm products prices, the wholesale price index for industrial materials advanced sharply to 261.8 in

LARGE CONSTRUCTION AWARDS PLACED RECENTLY IN ONTARIO

City	Value (\$000's)	Description
Chatham district	507	Grading, base and paving for Ontario highways.
Lindsay	5,000	New plant for Dominion Rubber Co. Ltd.
London	728	Parking building for Middlesex Holding Ltd.
North Bay district	820	Grading, drainage and granular base for Ontario highways.
Ottawa	1,037	Bridge approach for the city.
Ottawa district	775	Grading, drainage and cribwall for Ontario highways.
Sault Ste. Marie district	722	Grading, drainage and granular base for Ontario highways.
Sault Ste. Marie district	577	Base and paving for Ontario highways.
Stratford district	479	Paving for Ontario highways.
Toronto	60,000	Office complex, downtown area, for Toronto Dominion Centre Ltd.
Toronto	7,556	Construction work on Gardiner Expressway for Metro Toronto.
Toronto	1,452	Secondary school for North York Board of Education.



August (1935-39 = 100). This is 1.7% above the July, 1964, level and represents a departure from the relative stability of the index over the last few months. Of the 30 industrial commodities comprising the index, price increases were recorded for seven commodities, declines were felt in nine and fourteen remained unchanged. Included in the price rises were such items as steel scrap, domestic copper, hogs and linseed oil.

#### BUSINESS FAILURES

Business failure liabilities dropped in August to \$2.7 million seasonally adjusted. However, business failure liabilities in Ontario for the months of May, June and July averaged \$11.7 million per month on a seasonally adjusted basis and were significantly above the trend figures for the last fifteen years. This may be another indication of the second quarter pause in economic activity. Since the actual number of business failures showed no tendency to increase on trend it is probably that larger firms were going under.

Analysis of national figures for 1963 and the first half of 1964 indicate that since the first quarter of 1963 the proportion of business failures attributable to the retail trade and construction sectors of the economy have risen from 68% in number, and 45% in value of liabilities, to 69% and 54% respectively. Particularly noticeable in 1964 within these sectors have been failures among general contractors, farm supply and general stores, general merchandise stores and restaurants. Other industries such as textiles, paper, printing and publishing have also suffered in recent months.

In an economy where rapid and complex changes are occurring in the production and distribution of goods and services, business firms must increasingly scrutinize all facets of their operations. Dun and Bradstreet found that in Canada in 1963 the apparent causes of nearly 81% of business failures resulted from inadequate sales, and receivables and inventory difficulties. In 90% of the cases these difficulties stemmed from incompetence or a lack of managerial experience.

#### FINANCE

During the month of August relatively stringent monetary conditions continued to characterize most sectors of the Canadian money market. The day-to-day loan rate, for example, was on several occasions bid up to a level approximating the then prevailing rediscount rate which essentially remained slightly above 4% during the month.

The volume and value of trading on the Canadian bond markets was comparatively light and price fluctuations were fractional. Highlighting the month's otherwise dull activity was the floatation of a few sizeable new issues. Prominent amongst these was a

new \$65 million Ontario Hydro 5¼% debentures issue maturing October 1, 1980-84, priced at \$97.50 to yield 5.46%. New Canadian bond financings for the first eight months of 1964 totalled some \$2.03 billion, a decrease of 12.5% from last year's comparable total of \$2.32 billion.

On light trading volume, prices of quality industrial equities listed on the Canadian stock markets drifted aimlessly and without any semblance of conviction throughout most of August. Investors' participation, particularly from the U.S.A. was conspicuously absent. This was no doubt due largely to reserved buying following the final passage of the U.S. interest equalization tax despite the fact that most active issues in which these investors trade are exempt. The Toronto Stock Exchange Industrial Index closed the month at a level of 158.98, down 1.20 points on index over the month.

Canada's foreign exchange reserves (official holdings of gold and U.S. dollars) increased by \$42 million during August to close the month at a level of \$2,575.9 million.

Throughout August fractional but steady gains were registered by the Canadian dollar in terms of U.S. funds. After opening the month at a level of 92.55 cents the value of the Canadian dollar subsequently advanced to close the month at a level of 92.80 cents, up 0.25 cents over the month.

#### FOREIGN TRADE

For the second month in a row Canadian commodity exports exceeded \$¾ billion. July, 1964, exports valued at \$788 million were 29.8% larger than July, 1963. Exports over the period January - July, 1964, have risen each month and stand 23% above the comparable period of 1963 at a total of \$4.7 billion. Seven month export totals are up over last year to all major trading areas - United Kingdom +21.1%, United States +10.1%, other +51.1%.

Imports are also rising. Over the five month period from January - May, 1963, total commodity imports amounted to \$2,557.8 million. In the same period of 1964 commodity imports rose 17.2% to \$3,022.3 million. Of this total, imports from the United States came to \$2,144.6 million - an increase of 17.6% over the comparable period of 1963 - imports from the United Kingdom rose 21.4% to a total of \$245.9 million. At the end of the first quarter of 1964 Canada's current account deficit with the United States totalled \$543 million. For the period January - May, 1964, Canada's merchandise trade deficit with the U.S. alone was \$447.7 million (up 68.7% over the same period of 1963). The Federal Minister of Finance, Mr. Gordon, recently predicted that Canada's 1964 current account deficit would be in excess of \$600 million (1963, \$521 million), and thus would represent a reversal of the tendency in recent years for a declining current account deficit.

# AN INDEX OF ECONOMIC HEALTH FOR ONTARIO COUNTIES AND DISTRICTS

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## INTRODUCTION

The Department of Geography of the University of Toronto, with assistance from the Ontario Government, other universities and interested authorities, is now preparing an economic atlas of Ontario. This atlas, edited by Professor W. G. Dean and to be published in 1967, is designed both to provide a useful primary source of information about Ontario and to demonstrate the value of economic geography in solving problems of economic planning and development.

Much of the work in preparing the atlas is being performed by graduate students at the University as part of the graduate research program. One of these projects involves the devising of a map showing the relative economic prosperity (or, as it has been entitled "Economic Health") of the counties of Ontario. This article includes some of the results of the study, a description of the methodology used, and some comments on the results as they relate to individual counties.

The methods of measuring the economic health or growth of a particular economic region have taken on added importance in the last two or three years with the initiation of special government programs designed to stimulate the economy of slow growth areas. In 1961, the Federal Government devised a system of tax incentives to industries locating in slow growth areas which had high summer unemployment levels in the National Employment Service office districts for the period 1953-60. Under this definition, two Ontario cities, Windsor and Cornwall, qualified for special tax assistance. In 1963, a new set of tax incentives were introduced to replace the former program. The definition of slow growth area rested essentially on the amount of unemployment between May and October in the N.E.S.

office area for the previous eight years. Under this definition, eight of the 35 designated slow growth areas in Canada were located in Ontario. These were: Cornwall, Pembroke, Brantford, Chatham, Wallaceburg, Windsor, Elliot Lake, and Timmins.

Summer unemployment is probably as useful a single criterion as can be devised for developing a program of this sort. However, this method does not give a useful picture of the overall economic situation in a particular area because urban centres which have experienced rapid industrial growth normally attract workers from outside. Any fluctuations in economic activity in such a centre can result in much higher unemployment figures than for a low-income, relatively stagnant area.

During the course of the coming year, the Area Development Agency of the Department of Industry has indicated that it will be discussing the criteria used for selecting slow growth areas with a view to making appropriate changes. One or two provinces have announced that they are considering the provision of special economic assistance for areas which they have defined themselves. It is hoped that analysis of the type contained in this present research project can be helpful in these efforts.

## SCOPE OF PAPER

At the annual meeting of the Canadian Political Science Association in Charlottetown in June, a paper was presented by D. Michael Ray and Brian J. L. Berry of the University of Chicago entitled "Multivariate Socio-Economic Regionalization: a Pilot Study in Central Canada". In this paper they used factor analysis to draw out the underlying components in 88 sets of census data for Ontario and Quebec counties. A similar technique has been used in the present paper in an attempt to discover the



underlying order in a group of 16 variables, especially chosen because it was felt that each was in some manner a measure of economic conditions. Of the 16 sets of data chosen, four are direct measures of income, four are measures of growth over the period 1951-61, and the other eight measure specific characteristics relating to economic conditions. All but two of the variables were obtained from DBS. "Miles of King's highways in 1961" and "growth in motor vehicle registrations between 1951 and 1961" were obtained from the Departments of Highways and Transport of the Ontario Government.

The variables that have been chosen for the present study are among the best ones available on a county basis. They take into account human resources (percentage of population accounted for by immigrants and percentage of the population over five years of age with a university education), as well as the more traditional measures of income and production.

The choice of the years 1951 and 1961 as the limits of the period for measuring the growth factors was dictated by the availability of materials from the census. In some ways, however, the choice of this time period is not altogether appropriate for measuring economic growth. In 1951, the economy was well into the expansion stimulated by the Korean War. In early 1961, on the other hand, the economy reached the trough of a recession and the rest of the year comprised part of the recovery phase of the business cycle. One would expect, therefore, that manufacturing output would grow more slowly in this ten-year period as compared with, say, 1949 to 1959 or 1953 to 1963. This would be most marked in counties where there is a concentration of industry affected by the business cycle, such as in Essex or, to a lesser extent, Lincoln.

Although the calculations for this study used data for all of the 53 counties and districts in Ontario (53 because Kenora and Rainy River have been combined), only a sample of ten will be discussed in this paper. It is hoped that this sample of ten, one from each of the economic regions, will provide counties and districts differing in economic structures, problems and achievements, and convey to the reader a good approximation of economic conditions as they existed in Ontario in 1961.

Table I shows the data for each of the 16 variables for the counties and districts selected. Table II shows the rankings for each of the variables for the selected counties and districts.

#### CALCULATION OF ECONOMIC HEALTH INDEX

The variables discussed above are all partial measures of economic health and rankings on the 16 variables when seen together give a reasonably good picture of the general economic conditions within

each county in the study area. However, a data matrix like Table II is very difficult to read and many important details might be missed. In order to avoid this difficulty, the 16 variables can be grouped in such a manner that a single variable results which will be called the economic health index.

Perhaps the easiest way to group the variables would be to assign to them an equal weighting. In other words, the rankings for each county could be added together and the resulting totals could be called the health index. The rankings of the variables "percentage of wage earners earning below \$1,000", "percentage of total employment in agriculture" and "percentage of homes in need of major repair" would have to be subtracted because they are negative indicators of economic health.

This method of equal weighting assumes that each of the variables is an equal measure of economic health. This, however, is not necessarily the case, because it is obvious that "average family income" is a better indicator than "miles of King's highways". It is evident that if the variables are to be grouped, they must be weighted according to their worth as measures of economic health. To calculate such weightings, the technique of principal components analysis has been used.

In this case, the first principal component has been interpreted as an economic health factor and the factor loadings are the weightings that are assigned to each variable for the purpose of grouping. To calculate the factor loadings of the first principal component, a matrix of correlation coefficients (relating each variable to each other) is prepared. A portion of this matrix can be seen in Table III.

TABLE III

Variable	(5) Total Popu- lation 1961	(6) Popu- lation Change 1951-61	(7) Average Family Income 1961
(5) Total Population 1961	1.000	.468	.793
(6) Population Change 1951-61	.468	1.000	.794
(7) Average Family Income 1961	.793	.794	1.000

The correlation matrix expresses the inter-relationships between every possible pair of variables. The closer the coefficient of correlation is to 1.000, the closer the relationship between the two variables. Table III, for example, shows that total population is more closely related to average family income than it is to population growth.

Standard algebraic techniques are then used to break this matrix of correlation coefficients into factors with the aid of a programmed electronic com-

TABLE I

## DATA FOR TEN SELECTED ONTARIO COUNTIES AND DISTRICTS

VARIABLE	UNIT	THUNDER BAY	SUDBURY	GLEN- GARRY	HASTINGS	PEEL	LINCOLN	PERTH	ELGIN	ESSEX	GREY
1. Value Added in Manufacturing 1951-61	Percentage Change	8.5	61.7	374.7	66.9	83.9	15.0	78.7	27.1	13.9	39.0
2. Population Over 5 Years of Age with a Univ. Education	Percentage	3.8	3.9	2.7	4.1	8.4	5.6	3.1	3.7	5.3	2.8
3. Retail Sales 1951-61	Percentage Change	56.3	75.6	20.7	45.1	218.7	45.7	12.4	26.1	19.1	17.8
4. Agricultural Employment 1961	Percentage of Industrial Employment	1.9	1.4	40.9	8.3	6.9	9.5	25.7	25.5	8.5	30.7
5. Total Population 1961	Thousands	138.5	165.9	19.2	93.4	111.6	126.7	57.5	62.9	285.2	62.0
6. Population 1951-61	Percentage Change	31.5	51.4	8.6	25.7	100.4	41.8	9.6	13.2	18.9	5.2
7. Average Family Income 1961	Dollars	5,480	5,973	3,814	5,211	6,834	5,681	4,969	4,920	5,311	4,563
8. Persons 20 to 49 Years of Age 1961	Percentage of Population	40.2	41.0	30.9	38.0	42.0	39.1	35.1	36.2	37.2	33.6
9. Wage Earners Making More than \$6,000 a Year 1961	Percentage of Total Wage Earners	9.8	10.5	2.8	8.1	18.4	9.4	4.8	6.3	9.3	4.0
10. Wage Earners Making Less than \$1,000 a Year 1961	Percentage of Total Wage Earners	11.8	9.9	24.1	14.0	11.7	14.3	16.7	19.4	14.5	18.0
11. Average Income of Employees in Manufacturing 1961	Dollars	4,903	4,952	2,873	3,633	4,572	4,422	3,410	3,711	4,955	3,080
12. Immigrant Population 1961	Percentage of Total Population	24.2	14.1	4.7	9.6	22.7	26.4	10.8	18.6	22.1	7.2
13. Value Added in Manufacturing Per Employee 1961	Dollars	11,393	23,713	7,616	7,838	9,496	7,619	6,915	6,163	9,964	5,224
14. King's Highways 1961	Miles	652	324	59	238	125	79	131	116	216	144
15. Motor Vehicle Registrations 1951-61	Percentage Change	97.8	118.9	34.2	57.1	181.8	86.0	30.1	51.8	52.3	25.3
16. Homes in Need of Major Repairs 1961	Percentage of Total Homes	6.0	6.8	13.5	7.2	2.5	3.6	3.8	7.6	5.1	5.2

TABLE II

RANKINGS OF DATA FOR TEN SELECTED ONTARIO COUNTIES AND DISTRICTS  
(There are 53 Possible Rank Positions)

VARIABLE	UNIT	THUNDER BAY	SUDBURY	GLEN- GARRY	HASTINGS	PEEL	LINCOLN	PERTH	ELGIN	ESSEX	GREY
1. Value Added in Manufacturing 1951-61	Percentage Change	49	25	2	22	17	42	18	37	50	34
2. Population Over 5 Years of Age with a Univ. Education	Percentage	26	25	50	19	3	8	44	28	10	49
3. Retail Sales 1951-61	Percentage Change	14	4	41	23	1	22	48	36	43	45
4. Agricultural Employment 1961	Percentage of Industrial Employment	51	52	2	33	35	29	11	12	32	8
5. Total Population 1961	Thousands	10	7	49	18	13	12	31	28	4	29
6. Population 1951-61	Percentage Change	20	5	45	23	2	8	43	39	30	50
7. Average Family Income 1961	Dollars	15	6	52	24	3	12	28	29	19	43
8. Persons 20 to 49 Years of Age 1961	Percentage of Population	10	9	52	16	5	14	35	31	23	44
9. Wage Earners Making More than \$6,000 a Year 1961	Percentage of Total Wage Earners	9	8	52	19	2	12	36	24	14	45
10. Wage Earners Making Less than \$1,000 a Year 1961	Percentage of Total Wage Earners	45	51	4	36	47	33	20	11	31	13
11. Average Income of Employees in Manufacturing 1961	Dollars	7	5	50	32	12	15	37	30	4	47
12. Immigrant Population 1961	Percentage of Total Population	5	23	49	36	8	3	32	14	9	45
13. Value Added in Manufacturing Per Employee 1961	Dollars	5	1	32	27	13	31	37	42	11	46
14. King's Highways 1961	Miles	2	6	47	10	34	44	30	37	12	27
15. Motor Vehicle Registrations 1951-61	Percentage Change	8	5	41	24	2	11	45	30	29	50
16. Homes in Need of Major Repairs 1961	Percentage of Total Homes	32	21	1	16	51	48	47	12	36	35



TABLE IV  
FACTOR LOADINGS

Variable	Rank	Sample of Factor Loadings
(1) Value Added in Manufacturing 1951-1961	16	.13297
(2) Population Over 5 Years of Age with a University Education 1961	9	.78816
(3) Retail Sales 1951-61	10	
(4) Agricultural Employment 1961	11	-.72965
(5) Total Population 1961	8	
(6) Population 1951-61	4	.85103
(7) Average Family Income 1961	1	.95954
(8) Persons 20 to 49 Years of Age 1961	2	
(9) Wage Earners Making More than \$6,000 a Year 1961	3	
(10) Wage Earners Making Less than \$1,000 a Year 1961	6	-.83485
(11) Average Income of Employees in Manufacturing 1961	7	.79136
(12) Immigrant Population 1961	12	.70813
(13) Value Added in Manufacturing Per Employee 1961	14	
(14) King's Highways 1961	15	.32982
(15) Motor Vehicle Registrations 1951-61	5	
(16) Homes in Need of Major Repairs 1961	13	-.57790

puter.<sup>43</sup> This process permits the extraction of a series of individual components which account for the variance between the 16 characteristics measured. The first principal component, which we have called the economic health component, accounts for 56% of the total variance. The remaining variations between the characteristics of the counties are explained by unique features particular to the characteristic being measured and the rounding error. A sample of the factor loadings in the first principal component can be seen in Table IV.

As one would expect, the income variables have heavier factor loadings than most of the other variables. The four variables measuring income are respectively first, third, sixth and seventh in the weighting among the 16.

The four variables measuring growth are of different importance in compiling the health index. Over-

all population change and growth in motor vehicle registrations are quite significant, growth in retail sales is tenth in weighting of the 16 variables, while growth in value added in manufacturing has the lowest weighting of all 16.

The factor loadings range from -1 to 1, and are the weightings used in grouping the 16 variables. As was expected, variables 4, 10 and 16 have negative loadings and variables 1 and 14 have low positive loadings. In order to group the 16 variables, the following model is used for each county:

$$HI_c = A_1X_1 + A_2X_2 + \dots + A_{16}X_{16} \quad \left\{ \begin{array}{l} HI_c = \text{County Health Index} \\ A_1 \dots A_{16} = \text{Factor Loadings} \\ X_1 \dots X_{16} = \text{Rank Values of Variables} \end{array} \right.$$

In other words, the health index for each county is equal to the sum of the county's rank of every variable times the corresponding factor loadings for each variable. Because variable ranks are being summed, it is obvious that the lower the index the healthier the county. If the index is a minus quantity, the larger the number, the healthier the county. Table V is a listing of the health indices for the ten selected Ontario counties and districts.

TABLE V

Peel	-16.68	Hastings	150.80
Sudbury	- 8.21	Elgin	258.45
Thunder Bay	20.50	Perth	295.88
Lincoln	59.23	Grey	375.77
Essex	102.14	Glengarry	431.34

Mean for all 53 counties and districts = 195.27

<sup>43</sup> This algebraic factor analysis may be described as follows: The sum of the cells in the principal diagonal represents the total variance present in this matrix. In this case, there are 16 cells, each with a value of 1.00. Therefore, the total variance present in this matrix is 16.00. In order to find the principal component of this correlation matrix, those factors which account for the maximum possible variance in the rows and columns must be subtracted from the unit values in the principal diagonal. The square roots of these factors are called the factor loadings. Not all of the variation can be explained on the first factor because the following constraint exists. "No factor loading can be of such magnitude that, if when multiplied by any other factor loading, the correlation coefficient of the two variables represented by the two factor loadings is exceeded by the product of the two factor loadings." In other words, one factor loading cannot account for all the variance in a variable, unless the correlation coefficient between that variable and all the other variables is equal to 1.00.

## DISCUSSION AND EXPLANATION

The economic health indices for all 53 counties and districts indicate the fairly balanced and mature nature of the Ontario economy. For example, the mean index for all 53 counties and districts falls between the 27th and 28th counties while the median county is the 27th. The indices appear to be normally distributed with a low standard deviation. This indicates a relatively even distribution of wealth across the province. In the province of Quebec, for example, where the economy is less diversified, one would expect that the mean index would fall much closer to the top ranking counties. In that province there is a heavy concentration of the province's wealth in the few counties surrounding and including Montreal.

The rankings show, as one would expect, that the more highly urbanized, industrialized counties fared better than the agricultural areas. It was feared that the health index would give a ranking which was almost a replica of the ranking of the counties in terms of degree of urbanization. (This appears as variable 17 in Tables VI and VII). However, there were a number of significant differences between the rankings. Essex county, for example, while the second most urbanized among the ten counties selected, ranked only fifth in "economic health".

The fact that agricultural employment as a percentage of total employment ranked only eleventh in terms of factor weighting among the 16 variables was also reassuring. In any index based so heavily on measurements of income, it is to be expected that agricultural areas, where cash income is supplemented by income in kind, would rank lower than they might if all farm income could be taken into consideration. The rankings of all 53 counties and districts, however, do show a definite gradation among predominantly agricultural counties from the relatively wealthy ones dependent on cash crops and other specialized products to the more marginal farming areas on the edge of the Canadian Shield.

In order to pinpoint the reasons for any particular county's showing in the overall index, a comparison of the counties' economic health rankings with the ranking of the counties in terms of individual characteristics proved to be very useful. Table VI ranks the selected counties and districts from 1 to 10 in terms of the 16 variables on which the health index was based and three additional variables which it was thought would provide an interesting comparison (17, 18 and 19). Table VII shows the deviation in ranking for each of the ten counties and districts between the index of economic health and these 19 variables. Variables 4, 10 and 16 have been ranked in reverse order because they represent negative factors.

In the *Economic Geography of Canada* by Camu, Weeks and Sametz which was published earlier this year, per capita disposable personal income was esti-

mated for all of the counties in Canada. Using their estimates for the ten selected counties and districts, it was found that Essex, which ranked third among the counties in the sample in terms of per capita disposable personal income, ranked only fifth in terms of the health index. On the other hand, Thunder Bay, which ranked fifth in terms of per capita personal disposable income, ranked third in the economic health index. This is reassuring because it indicates that, although Essex is a high income county, its slow growth in the ten years under discussion served to pull its general health ranking down. On the other hand, Thunder Bay, in common with other districts in northern Ontario, has a lower than average percentage of population in the labour force than the provincial average (very few women work in the major industries — forest products and mining) and therefore, although wages are high, per capita disposable income is not as high. For such areas, per capita personal disposable income may not be the best measurement of economic health. Thunder Bay's health index ranking was also boosted because it was a centre of attraction for immigrants, and had a very low proportion of agricultural workers in the labour force.

Camu, Weeks, and Sametz also had a table showing the ratio of labour force to population by counties. This characteristic, which is listed as variable 19 in Table VII, was found to bear little direct relationship to the health index. As we have pointed out, the districts of northern Ontario have a lower than average percentage of the population in the labour force. On the other hand, some of the agricultural counties like Grey, Elgin and Perth ranked fairly high. This may be due both to smaller proportions of children in their population and the existence of certain industries containing a high proportion of female employees.

An investigation of the deviations from the health index ranking shows little significant variation among those variables with high factor loadings. Essex again is a special case both in total population and in average income of manufacturing employees. On these variables, it ranks much higher than in "economic health". Peel, on the other hand, shows the reverse — once again indicating that growth characteristics can disrupt the income ranking. The two northern Ontario districts which until recently have been short of institutes of higher education show up poorly in the percentage of university graduates. They also have a higher percentage of homes in need of major repairs than their income ranking would lead one to expect. This may be related to the more rapid shifts of population and higher costs of living in these areas than in Grey and Perth counties where there were fewer homes in poor condition even though average incomes were lower.

Essex was the only county which ranked consistently lower in the four variables measuring eco-



TABLE VI

## RANKING AMONG SELECTED COUNTIES AND DISTRICTS BY VARIABLES

	THUNDER BAY	SUDBURY	GLEN- GARRY	HASTINGS	PEEL	LINCOLN	PERTH	ELGIN	ESSEX	GREY
1. Value Added in Manufacturing 1951-61	9	5	1	4	2	8	3	7	10	6
2. Population Over 5 Years of Age with a University Education	6	5	10	4	1	2	8	7	3	9
3. Retail Sales 1951-61	3	2	7	5	1	4	10	6	8	9
4. Agricultural Employment 1961	2	1	10	4	3	6	8	7	5	9
5. Total Population 1961	3	2	10	6	5	4	9	7	1	8
6. Population 1951-61	4	2	9	5	1	3	8	7	6	10
7. Average Family Income 1961	4	2	10	6	1	3	7	8	5	9
8. Persons 20 to 49 Years of Age 1961	3	2	10	5	1	4	8	7	6	9
9. Wage Earners Making More Than \$6,000 a Year 1961	3	2	10	6	1	4	8	7	5	9
10. Wage Earners Making Less Than \$1,000 a Year 1961	3	1	10	4	2	5	7	9	6	8
11. Average Income of Employees in Manufacturing 1961	3	2	10	7	4	5	8	6	1	9
12. Immigrant Population 1961	2	6	10	8	3	1	7	5	4	9
13. Value Added in Manufacturing Per Employee 1961	2	1	7	5	4	6	8	9	3	10
14. King's Highways 1961	1	2	10	3	7	9	6	8	4	5
15. Motor Vehicle Registrations 1951-61	3	2	8	5	1	4	9	7	6	10
16. Homes in Need of Major Repairs 1961	6	7	10	8	1	2	3	9	4	5
17. Urban Population as Percentage of Total Population	3	4	10	6	1	5	7	8	2	9
18. Per Capita Disposable Personal Income	5	2	10	7	1	4	8	6	3	9
19. Labour Force as Percentage of Population	5	9	10	8	2	6	1	4	7	3
Health Index	3	2	10	6	1	4	8	7	5	9

TABLE VII

## DEVIATION OF RANKING OF VARIABLES FROM HEALTH INDEX RANKING

	THUNDER BAY	SUDBURY	GLEN- GARRY	HASTINGS	PEEL	LINCOLN	PERTH	ELGIN	ESSEX	GREY
1. Value Added in Manufacturing 1951-61	-6	-3	+9	+2	-1	-4	+5	—	-5	+3
2. Population Over 5 Years of Age with a University Education	-3	-3	—	+2	—	+2	—	—	+2	—
3. Retail Sales 1951-61	—	—	+3	+1	—	—	-2	+1	-3	—
4. Agricultural Employment 1961	+1	+1	—	+2	-2	-2	—	—	—	—
5. Total Population 1961	—	—	—	—	-4	—	-1	—	+4	+1
6. Population 1951-61	-1	—	+1	+1	—	+1	—	—	-1	-1
7. Average Family Income 1961	-1	—	—	—	—	+1	+1	-1	—	—
8. Persons 20 to 49 Years of Age 1961	—	—	—	+1	—	—	—	—	-1	—
9. Wage Earners Making More Than \$6,000 a Year 1961	—	—	—	—	—	—	—	—	—	—
10. Wage Earners Making Less Than \$1,000 a Year Ended	—	+1	—	+2	-1	-1	+1	-2	-1	+1
11. Average Income of Employees in Manufacturing 1961	—	—	—	-1	-3	-1	—	+1	+4	—
12. Immigrant Population 1961	+1	-4	—	-2	-2	+3	+1	-2	-1	+1
13. Value Added in Manufacturing Per Employee 1961	+1	+1	+3	+1	-3	-2	—	-2	+2	-1
14. King's Highways 1961	+2	—	—	+3	-6	-5	+2	-1	+1	+4
15. Motor Vehicle Registrations 1951-61	—	—	+2	+1	—	—	-1	—	-1	-1
16. Homes in Need of Major Repairs 1961	-3	-5	—	-2	—	+2	+5	-2	+1	+4
17. Urban Population as Percentage of Total Population	—	-2	—	—	—	-1	+1	-1	+3	—
18. Per Capita Disposable Personal Income	-2	—	—	-1	—	—	—	+1	+2	—
19. Labour Force as Percentage of Population	-2	-7	—	-2	-1	-2	+7	+3	-2	+6
Health Index Ranking	3	2	10	6	1	4	8	7	5	9

economic growth than in "economic health". Generally "growth" and "health" went together, except in the case of growth of manufacturing output, where there were wide deviations. This was due largely to the difference in the size and importance of the manufacturing base of the different counties (this variable therefore had a low weighting in calculating the index). Thus, Glengarry's phenomenal percentage increase in manufacturing output had little effect on its economic health index because it had almost no manufacturing in 1951.

#### CONCLUSIONS

Several conclusions can be drawn from the results discussed above.

(a) Peel county is a perfect example of a county which was once agricultural but which has now been transformed into a medium to high income suburban area. Both its income levels and rates of growth are very high. There is almost no big city poor class to offset these predominant characteristics.

(b) Pioneer districts in the Canadian Shield (among the sample are Thunder Bay and Sudbury) rank quite high. Since most of the labour force is engaged in high wage primary resource activity with little low income agriculture, average incomes are very high. The index hides the fact that costs of living may be higher in northern Ontario which would reduce real wealth to some extent.

(c) Lincoln and Essex counties are both highly urbanized centres of secondary manufacturing. Both St. Catharines and Windsor are heavily dependent on the automotive industry for which 1961 was not a good year. Industry in Lincoln county is somewhat more diversified, however, while Essex county was hit hard by the exodus from Windsor in the mid-1950's of the Ford assembly plant and several automobile parts firms.

(d) The economies of Hastings, Elgin and Perth are all strongly influenced by conditions in their major urban centres — Belleville, St. Thomas and Stratford. Agriculture counts for least in Hastings, much of which is Canadian Shield country (the rise and decline of Bancroft have little influence on the measurements), while Elgin is the most agricultural and with perhaps the richest agriculture of the three. Each of these counties are slightly away from the main industrial urbanized complex and therefore have not shared fully in the industrial expansion.

(e) Glengarry and Grey counties are both predominantly agricultural and separated from the main centres of economic activity in the province. Grey county is consistently low in growth factors, which is common to all of the counties of the Lake Huron - Georgian Bay region (with the exception of Simcoe). The industries in Grey tend to be labour intensive with relatively low wages. Glengarry is almost totally agricultural with very low average incomes.

A major fault with the methods used lies in the size of the unit under study. For the purposes of mapping, data by townships would be much more useful. A map of economic health is now being prepared for the Economic Atlas of Ontario using the data derived from the present study. It is hoped that some combination of the health index and population (population is the only non-agricultural statistic given by D.B.S. on a township basis) will enable the preparation of a less generalized map than is possible using county data alone. In this way, individual problem areas which may be hidden by the use of aggregate county or district statistics may be brought out more clearly, (e.g., Elliot Lake in the middle of prosperous Algoma district in 1964).

The other major problem is the fact that this study does not define economic health. The choice of the variables was a subjective decision which dictated in advance to a large extent the definition of economic health. The index probably comes closest to a measurement of current incomes and growth in a county. In Ontario, it gives a bias in favour of urban industrial counties. Although the study may be criticized for its choice of variables (and a lack of distinction between variables which are causes and those which are effects), it is probable that the inclusion of other economic measurements in calculating the index would produce very similar rankings. This index has been tested by other measurements, such as employment growth, and the rankings have held up well.

It is hoped that this study will produce some useful by-products. The calculation of an economic health index tends to place the economies of the counties and districts of Ontario in perspective. Some of the deviations between the index rankings and the rankings of different variables may point the way towards specific problem areas. In fact, work is now underway in the Economics Branch to follow up some of the avenues suggested in this paper.



ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED  
(\* Figures for Canada)

LEADING INDICATORS

	July	August	September	October	November	December	January	February	March	April	May	June	July	August
Average Weekly Hours Worked in Manufacturing	40.7	40.6	40.3	40.9	41.5	40.6	41.6	41.4	40.9	41.3	41.5	102	95	81
Business Failures - Number	87	34	93	97	92	103	73	81	61	75	80	102	10,424	2,738
Business Failures - Liabilities	4,135	3,606	6,902	4,518	5,139	5,194	3,493	1,574	2,194	6,754	11,965	12,832	10,424	2,738
New Orders in Manufacturing*	2,396	2,421	2,511	2,518	2,501	2,629	2,676	2,560	2,699	2,686	2,507	2,550	160.5	156.6
T.S.E. Index - 77 Stocks	123.2	127.1	135.9	138.0	133.1	135.1	140.5	138.7	143.3	148.6	155.3	158.9	5,213	44.9
New Dwelling Units Starts	4,361	4,219	3,624	4,421	3,399	5,694	5,470	4,899	3,676	4,136	4,087	4,238	57.6	156.6
Housing Contracts	35.4	32.7	43.6	53.8	45.4	60.8	94.5	58.8	51.5	80.0	56.9	40.1	57.6	44.9
Business, Industrial and Engineering Contracts	94.5	94.9	61.7	89.1	112.6	64.9	95.5	78.8	60.1	130.3	104.9	81.5	109.6	97.5
Money Supply*	16,091	16,081	16,165	16,434	16,522	16,612	16,797	16,758	16,363	17,003	17,095	17,211	17,398	17,433

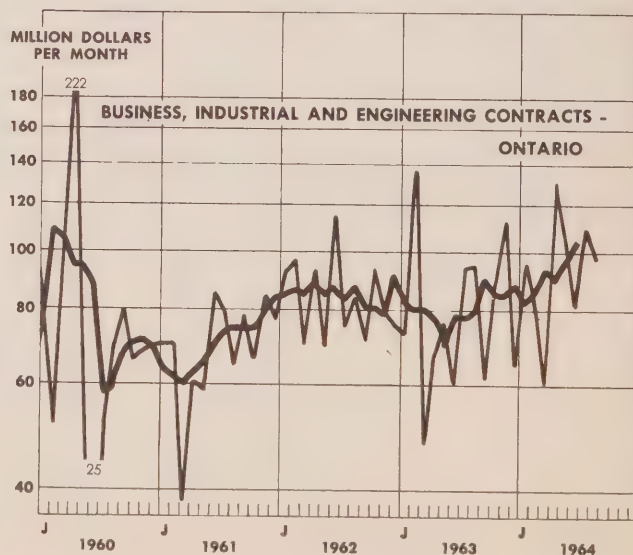
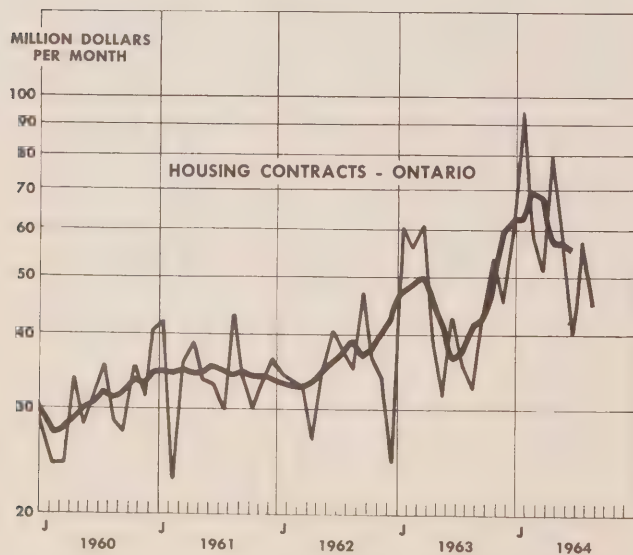
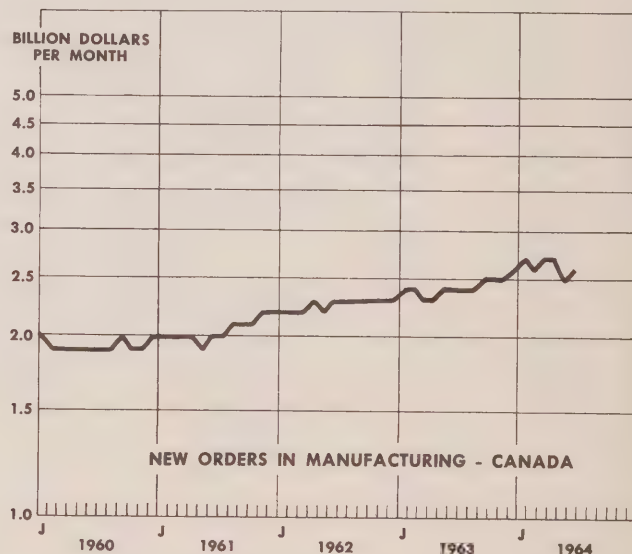
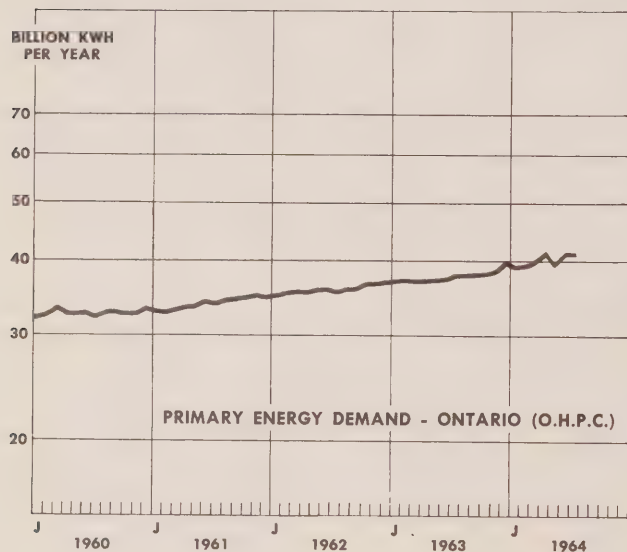
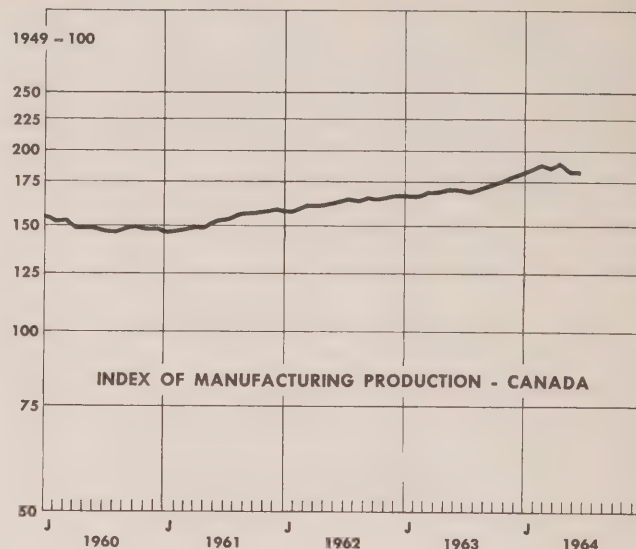
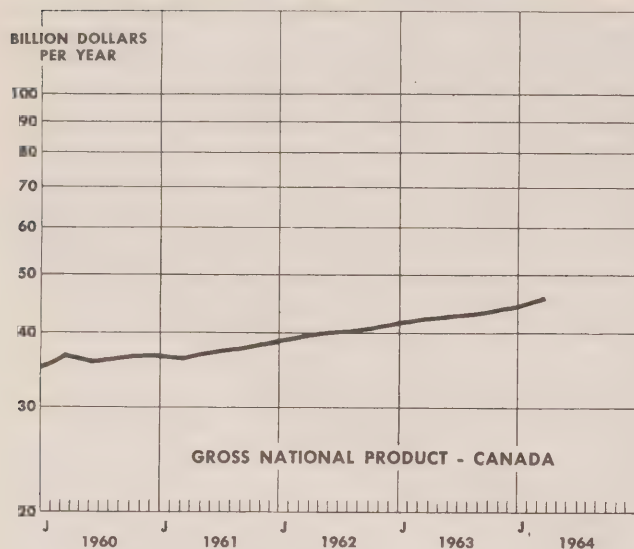
COINCIDENTAL AND LAGGING INDICATORS

Gross National Product*	\$ Million	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Industrial Production*	1949=100	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Manufacturing	191.9	194.9	198.1	200.2	203.5	207.7	210.8	212.1	210.2	214.7	209.2	210.8	185.4	185.4
Non-Durables	170.5	173.4	175.4	177.4	180.2	183.5	185.2	188.6	186.3	190.4	185.4	185.4	180.9	182.9
Durables	170.1	173.8	173.7	175.2	175.9	180.1	179.7	184.2	180.1	185.5	180.9	182.9	180.9	188.3
Mining	170.9	172.9	177.4	179.9	185.2	187.6	191.6	193.8	193.6	196.1	190.6	188.3	321.0	326.9
Electric Power & Gas Utilities	281.5	289.4	300.8	303.0	305.1	311.8	335.2	324.9	317.3	321.0	321.0	326.9	384.5	403.5
Cheques Cashied in Clearing Centres	370.8	365.9	372.8	376.3	390.6	403.8	391.2	384.3	396.4	409.3	384.5	403.5	3,749	3,749
Retail Trade	3,084	3,220	3,236	3,269	3,301	3,273	3,470	3,763	3,754	3,540	3,705	3,749	608	608
Labour Income	548	594	560	566	597	599	612	600	603	584	621	602	807	807
Labour Force	745	759	761	767	771	781	790	795	800	798	803	807	2,582	2,582
Employed	2,483	2,479	2,474	2,489	2,490	2,512	2,490	2,492	2,521	2,513	2,530	2,583	2,437	2,488
Unemployed	2,384	2,390	2,388	2,397	2,403	2,430	2,420	2,435	2,462	2,440	2,442	2,457	95	86
Unemployed as % of Labour Force	99	89	86	92	87	82	70	57	59	73	88	126	3.7	3.3
Industrial Employment	4.0	3.6	3.5	3.7	3.5	3.3	2.8	2.3	2.3	2.9	3.5	4.9	3.7	3.3
Average Hourly Earnings in Manufacturing	125.3	127.1	128.2	128.3	129.2	129.8	130.7	131.5	132.1	131.5	131.4	132.2	41.01	41.01
Primary Energy Demand - OHPC	2.04	2.05	2.07	2.07	2.09	2.10	2.09	2.09	2.11	2.10	2.11	3.095	4,876	4,876
New Dwelling Unit Completions	37.83	37.78	37.84	37.92	38.34	39.85	38.84	38.97	39.88	41.25	39.33	40.98	2,534	2,534
	3,277	3,382	3,318	3,652	2,879	3,050	2,641	4,495	10,184	6,240	3,454	3,095	2,534	2,534

ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED

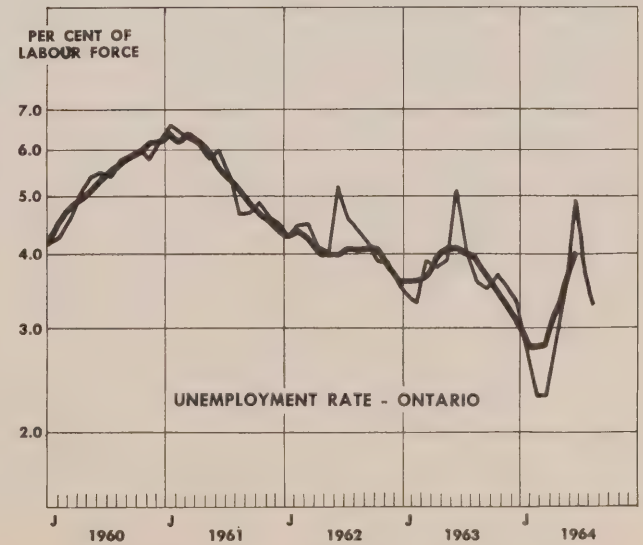
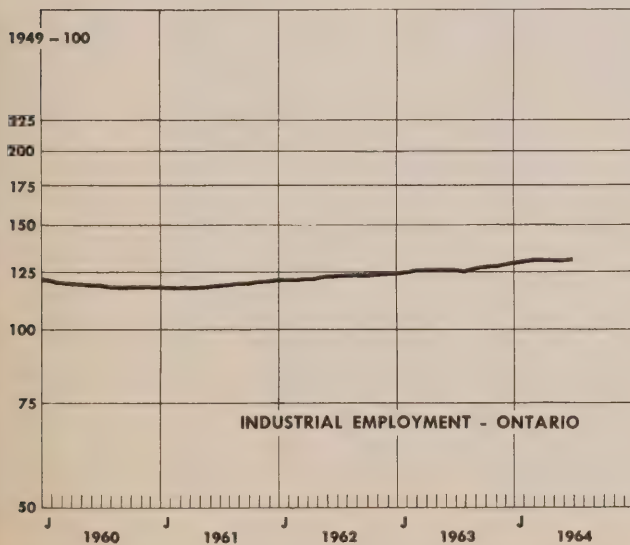
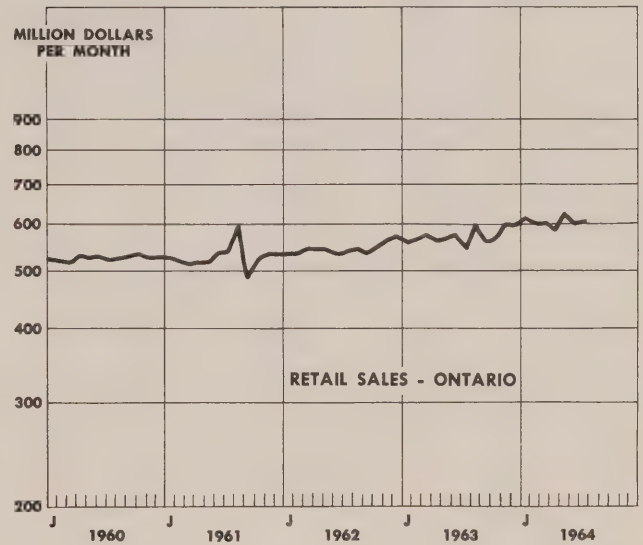
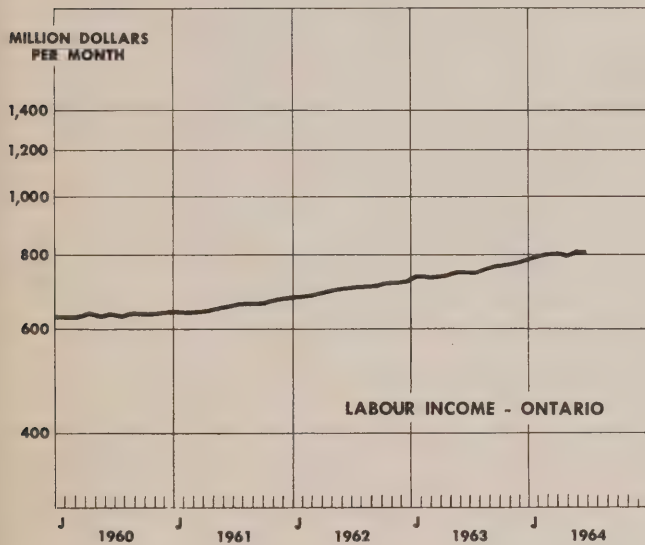
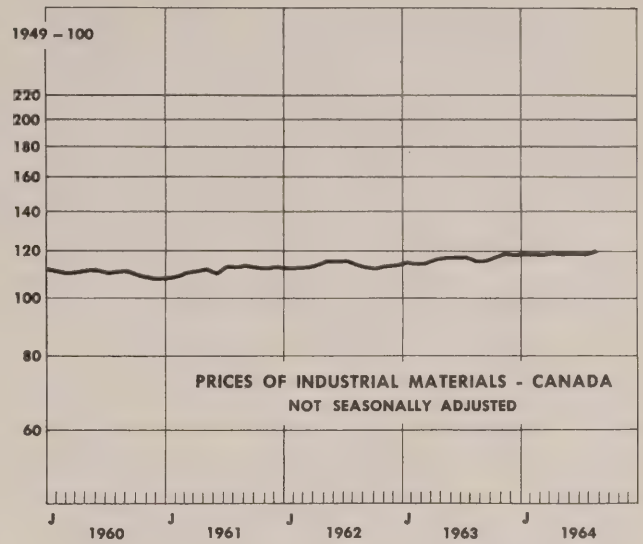
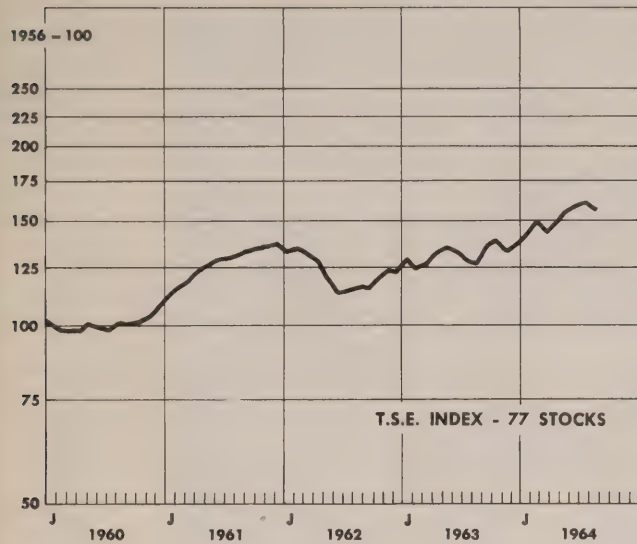
Prices, Industrial Materials*	1935-39=100	255.1	251.4	251.0	254.9	258.8	257.5	258.6	257.1	258.8	258.7	257.8	257.3	261.8
Domestic Exports*	\$ Million	592.8	543.2	586.9	624.7	670.4	638.9	535.1	583.1	651.4	670.5	774.6	2,576	2,576
Imports for Consumption*	\$ Million	585.4	532.0	545.1	623.6	623.9	564.8	512.6	576.6	709.4	657.6	2,534	2,534	2,534
Foreign Exchange Reserves*	\$ Million U.S.	2,501	2,471	2,568	2,581	2,631	2,595	2,582	2,466	2,481	2,509	2,534	2,534	2,534

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED





# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES





PERIODICALS BRANCH  
(Humanities and Social Sciences)

# ONTARIO ECONOMIC REVIEW



OCTOBER 1964  
VOL. 2  
NO. 6

DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. S. J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*





# THE ONTARIO ECONOMY

In the past two months, there has been a moderate slackening in contract awards for non-residential construction in Ontario. The labour force has decreased slightly as students returned to schools and universities. The unemployment rate for September was a low 3.3% seasonally adjusted. Industrial production continued its mixed tendency showing some declines in mining and increases in durable manufacturing in July. Later statistics, available for certain industries, reveal that production levels of cars, trucks, steel and pig iron remained high in August and September.

Total Canadian exports during August were considerably higher than last year, offsetting a rising level of imports. In September foreign exchange reserves increased to \$2.63 billion (U.S.) — the highest level since November, 1963.

## PRODUCTION

For July, the Canadian industrial production index stood at 211.0 seasonally adjusted — a negligible decrease from the revised June figure of 211.2 (1949 = 100). Declines in mining production and non-durable manufactures were virtually offset by increases in durable manufactures and electric power and gas utilities.

Though production of gold, copper, and iron ore showed slight increases over June levels, a decline in nickel production (down 8%) lowered the metal production index by 6%. Fuel production was also lower. The production of non-metals was higher with asbestos up 7%.

Amongst the non-durable manufactures, food and beverages, clothing and miscellaneous goods showed no change from June levels. Showing declines were rubber products, tobacco and tobacco products, textiles, printing and publishing, products of petroleum and coal, and chemicals and allied products. On the other hand, the production of leather products and paper products increased in July.

Durable goods manufacturing was 2% higher in July than in the previous month due mostly to increases in the production of wood products, iron and steel products, transportation equipment and electrical apparatus and supplies. A small decline took place in the manufacture of brass and copper products. Electric power and gas production rose 3% in

July. Though gas production actually fell, the movement was more than offset by an increase of 4% in electric power production.

In September steel ingot and pig iron production was 735 and 554 thousand tons, respectively. For both products this was considerably higher than September levels in 1963 but lower than some levels attained in past months of this year. For the first nine months, production of steel ingots and pig iron bettered that of the same period last year by 11% and 13% respectively.

The September production of 40,270 cars was a record for the month and was a clear 27% above the previous September record set in 1963. Truck production at 9,697 was 29% higher than in September last year. October production will be affected by the layoff of some 11,000 workers at General Motors in Oshawa. The G.M. labour dispute in the United States was partially settled over the weekend of October 23-25 and it was hoped that within a week production in Oshawa could resume at maximum output.

Most parts of Ontario had a good agricultural year. Crops of hay, oats, barley, winter wheat, mixed grain and corn were more than satisfactory. The centre of the potato region suffered somewhat from heavy rainfalls. Beef production was good in the central and western Ontario areas but down a little in the east because of drought. This drought has also affected dairy production which is down about 1% over levels of last year.

## CONSTRUCTION

On a seasonally adjusted basis, the value of September housing contracts in Ontario stood at \$47.7 million, 6% above that of August. The value of business, industrial and engineering contracts, seasonally adjusted, declined to \$71.8 million, down 26% from August. This fall was paralleled in the other provinces, the national average dropping 24% since August. Owing to the large irregular component in the seasonal adjustment, one must be careful in evaluating the significance of monthly changes.

In Ontario centres of 5,000 population and over, some 4,764 new dwelling units were started during September (unadjusted figures). This was an increase of 12% over September last year and of 13% in a cumulative nine month comparison of 1964 and 1963.

The following cities experienced over one thousand dwelling unit starts in their metro areas in the first nine months: Hamilton 3,786 (2,793 in Jan.-Sept. 1963), Kitchener 2,293 (1,736), London 1,874 (1,669), Ottawa 3,337 (3,959) and Toronto 19,252 (16,983).

The number of dwelling units under construction on Sept. 30 in centres of 5,000 and over was 8% higher this year than in 1963. The number of completions for the first nine months was substantially higher than during the same period last year — up 56%.

According to the MacLean Building Guide, in September there was \$83.6 million worth of large awards (\$1 million and over). This represents 58% of the total awards in residential and non-residential construction in the province. Some of the more substantial current awards are listed in the table below.

#### EMPLOYMENT

The labour force in both Ontario and Canada declined in September from August as students returned to schools and universities. The number of people employed and the number unemployed for both the province and the nation also declined.

The September provincial and national unemployment rates of 2.2% and 3.1% respectively, compare favourably with the 2.3% and 3.7% rates of September, 1963. On a seasonally adjusted basis, the September Ontario labour force numbered 2,549 thousand of which 2,464 thousand were employed. With only 85 thousand unemployed, the seasonally

adjusted unemployment rate was down to 3.3%. At the National Employment Service offices in Ontario, the number of registered applicants for work was 3% lower than in September, 1963.

A continuing high level of manufacturing production resulted in unsatisfied demand for skilled help in many lines. Meat and poultry processors, wine producers, tire and leather goods manufacturers and textile producers were short of skilled workers. Manufacturers of iron and steel products experienced shortages of trained machinists, steel lay-out men, and tool and die makers. An exception was the temporary layoff of over 900 workers at agricultural implement plants in Brantford and Toronto, owing to model changeovers.

With the exception of General Motors, automobile producers were in full production of new models during September. The G.M. strike in the U.S. started affecting employment in Oshawa at the end of the month, though the layoff of some 11,000 workers came in the second week in October.

Electrical apparatus and supply industries and non-ferrous metal products industries reported shortages of skilled workers particularly in the manufacture of hydro-power generating equipment and jewellery and silverware. The non-metallic product industries and chemical product industries were in approximate labour balance.

In the trade sectors of the labour force, there were shortages of truck drivers, warehousemen, wholesale stock clerks, shippers and receivers, and retail cashiers and sales clerks. Car dealers and repair garages

LARGE CONSTRUCTION AWARDS PLACED RECENTLY IN ONTARIO

City	Value (\$ million)	Description
Burlington	1.3	Apartments
Etobicoke township	3.5	Apartments
Grand Bend	2.1	Water intake and plant drain
Hamilton	1.7	University building
Kingston	1.3	Defense dormitory
Kitchener	1.1	Apartments
London	1.0	Apartments
North York township	3.0	Apartments
Ottawa	2.0	Office building
St. Catharines	2.5	Industrial Administration Building
Stratford	2.0	Factory
Toronto	2.5	Rapid transit structures
Toronto	13.2	Water purification plant
Toronto	7.0	Apartments

Source: MacLean Building Guide, Vol. 44/10, 23.



AVERAGE WEEKLY WAGES AND SALARIES FOR SELECTED ONTARIO CITIES

	Industrial Composite		Manufacturing	
	July 1964	July 1963	July 1964	July 1963
	\$	\$	\$	\$
Ottawa-Hull	80.91	77.48	91.71	87.63
Toronto	91.35	87.61	94.24	90.05
Hamilton	95.67	92.48	102.95	98.91
St. Catharines	101.34	95.52	108.53	102.49
Brantford	83.19	80.83	85.58	83.77
Kitchener	81.72	77.78	81.73	78.06
London	84.39	79.91	89.84	85.02
Windsor	102.25	92.09	118.17	106.04
Fort William - Port Arthur	86.78	83.77	96.19	91.68

reported shortages of licenced automobile mechanics and body repairmen. The finance sector was marked with particular shortages of real estate salesmen. Insurance companies have had considerable turnover of staff and were affected by the returns to schools and universities. Due to increased activity, loan companies hired additional staff.

#### INCOME

On a seasonally adjusted basis, Ontario labour income was \$812 million for July —9% higher than July, 1963. Average provincial weekly wages and salaries were \$90.01 in July, 1964 (Canada \$86.75). Among the provincial averages, the higher paying fields were public utility operation \$110.17, mining \$102.13, construction \$101.64, transportation, storage and communication \$97.03, and manufacturing \$94.31. The lower groups were finance, insurance, and real estate \$85.43, trade \$76.67 and services \$65.74. The upper and lower limits were wages and salaries in the manufacture of motor vehicles at \$130.04, and hotels and restaurants at \$46.87 per week.

The above table reports for several Ontario cities the average weekly wages and salaries during July, 1964 - 1963 for the industrial composite (virtually all sectors of the economy) and for manufacturing alone.

#### SALES

Retail trade in Ontario was slightly lower (—0.9%) this August than in August, 1963, though the cumulative total of sales for the first eight months was over 5% higher than that of the comparable period last year. Showing high increases in the eight month comparisons were sales of lumber and building materials (14.8%), variety goods (12.5%), and department store goods (10.9%). Sales of drugs, restaurant

meals, shoes and family clothing showed the smallest gains. The only group to decline were fuel sales —down 8% from eight month totals of 1963.

Sales of new motor vehicles in Ontario during the first seven months were up 14.7% from the comparable period last year. This is a shade higher than the Canadian average of 14.0%. The gains were 13.5% in passenger car sales and 24.6% in commercial vehicle sales in Ontario. Though representing only 9% of the 1964 Ontario car market, the sale of overseas cars displayed a substantial 35% increase from seven month sales of 1963.

July wholesale trade reports indicate that Canadian trade at \$881 million was 7.4% higher than that of July, 1963. Seven month cumulative totals showed an 11.5% increase. The greatest gains were in the sales of farm machinery, construction materials and electrical wiring supplies. The sales of automotive parts and accessories, coal, coke, tobacco, confectionery and soft drinks showed the smallest increases.

Credit statistics reveal that chartered banks, finance companies, small loan companies and retail outlets continued to provide considerable credit during the month of July. Personal loans not fully secured (with stocks or bonds) showed the highest increase over July, 1963 — up 24%. Most of the other credit outlets averaged increases of approximately 10%.

#### PRICES

For the second month in a row, the Canadian consumer price index declined fractionally. For September it was 135.6, down 0.4% from August (1949 = 100). The decrease was caused mainly by a 1.8% drop in food prices. Lower prices were reported for fresh fruits, vegetables, sugar, steak, ham, lamb and poultry. Recreation and reading prices declined a little as a result of cheaper television repairs and



sale prices on magazine subscriptions. Partially offsetting these price movements were rises in the housing, clothing, transportation, health and personal care components. Normal seasonal buying patterns in September were reflected by increases in prices of furniture, floor coverings, textiles, household supplies, clothing, automobile repairs, batteries, tires and lubrication. The tobacco and alcohol index remained steady.

The wholesale index of Canadian farm products declined 2.3% in September from August due mostly to sharp decreases of potato prices and moderate decreases of rye prices. In eastern markets, corn, wheat, barley and peas were priced slightly higher than in August.

The wholesale price for industrial materials edged up to 260.7 in September from an August level of 259.9. Price movements included sharp decreases for raw sugar, lesser decreases for sisal, linseed oil, hogs, fir timber and raw cotton and increases for tin, raw rubber, domestic lead, steers, white lead and raw wool.

#### FINANCE

The supply of loanable funds in all sectors of the Canadian money market, which had remained relatively tight throughout most of September, increased slightly toward the end of the month. Reflecting this condition was the day-to-day loan rate which was quoted at around 4% prior to declining to a level of 3½% in the last few trading sessions of September.

Highlighting activity on the Canadian bond market was the successful offering of a new \$400 million Government of Canada issue. This refunding issue was in three parts, two of which were additions to maturities already outstanding, namely a 3¾% October 1, 1967 issue and a 5% October 1, 1968 issue. The largest of these three offerings was for \$200 million carrying a 3½% coupon and a 14-month maturity date. The quick absorption of these new offerings had a stabilizing effect on the entire market and most outstanding bond issues closed the month registering fractional gains. New Canadian bond financings for the first nine months of 1964 totalled \$2.54 billion — a decrease of 3.1% over 1963's comparable total of \$2.62 billion.

Investment-quality equities comprising all major sectors of the Canadian stock exchange continued to register consistent and sizeable advances throughout virtually all of September on moderately active trad-

ing. The Toronto Stock Exchange Industrial Index, which opened the month at a level of 158.72 closed at a level of 165.20, up some 2.5% over the month.

Canada's foreign exchange reserve (official holdings of gold and U.S. dollars) increased by \$48.6 million during September and thus closed the month at a level of \$2,624.5 million. This gain would have been considerably larger over the month, but for the \$50 million repaid to the International Monetary Fund reducing Canada's balance outstanding to IMF to \$57.2 million.

The value of the Canadian dollar in terms of U.S. funds continued to advance steadily throughout September, approaching the upper limits of its pegged value.

#### FOREIGN TRADE

Canadian exports were valued at \$674 million for August and \$5,280 million for the January to August period. Over comparable periods last year, this represented gains of 24% and 23% respectively. The nine month gains were particularly high in exports of food, feed, beverages and tobacco (53%) and inedible end products (42%). Among the exports of end products, aircraft complete with engines (475%), passenger automobiles and chassis (112%) and railway and street railway rolling stock (89%) showed the highest gains. Very few categories showed declines. The more noticeable declines were rubber tires and tubes (-31%), communication and related equipment (-11%), firearms, ammunition and ordnance (-29%) and containers and closures (-24%).

During the first four months, Canadian imports were 20% higher than during the same period last year. Large increases were reported in imports of end products (25%) whereas imports of crude materials, food, feed, beverages and tobacco, and live animals (no change) were less affected. Imports of fabricated materials rose at just below the 20% average. Among the end products, road motor vehicles (37%) and special industrial machinery (44%) showed substantial gains.

Total import and export figures indicate that the export balance on merchandise account for the first six months of 1964 was considerably higher at \$223.6 million than that of the comparable period in 1963 at \$122.3 million. The usual import balance in trade with the U.S. was larger this year — \$527.1 million as opposed to \$304.3 million for 6 month totals. Export balances with the U.K., Russia, and other countries more than offset this deficit.

# PRELIMINARY INDEXES OF PRODUCTION IN ONTARIO

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This article makes available to the public for the first time, three sets of preliminary indexes of production in the Ontario economy, and also a set of indexes for the aggregate of the nine provinces outside Ontario. The text of this article is concerned with the highlights of the statistics in the various tables, and an appendix includes notes on the construction of the indexes. The three sets of indexes are: 1) indexes covering all the sectors of the Ontario economy, 2) indexes of mineral industries, and 3) indexes of manufacturing groups.

## SUMMARY

Analysis of the comprehensive indexes of Ontario production of goods and services shows that the vital weaknesses in the Ontario economy during the slow growth period, 1957 to 1961, were construction and manufacturing. The indexes for Ontario manufacturing groups show that the key weaknesses in manufacturing were transportation equipment, electrical apparatus and supplies, and clothing. In the current cycle, strength has returned to construction and manufacturing, and economic growth in the Province has accelerated considerably, but the Ontario mining industry is being restrained by the declines for several minerals, most notably uranium and gold.

The Ontario economy is oriented more around manufacturing than are the economies of the United States and the aggregate of the other provinces in Canada, and its acceleration for the current cycle over the previous cycle is more the result of revival in manufacturing than is the case in the United States and the other provinces.

During the postwar period of fast economic growth, the high rate of expansion in manufacturing was accompanied by rapid rises in productivity (although one should not infer that both always occurred in the same industries), so that manufacturing required relatively little increases in manpower. In other words, the economy was already experiencing what many economists foresee as the result of the present trend towards automation. But the very

slow growth in manufacturing requirements for labour did not produce unemployment because the increases in the labour force were absorbed by construction and the services sector until the capital investment boom ended in 1958. When the construction industry entered a period of stagnation, and the great cyclical manufacturing industries declined, high unemployment emerged.

The reacceleration of the U.S. economy, the devaluation of the Canadian dollar, the temporary tariff surcharges and the trade crusades helped to accelerate manufacturing in 1962-1963. The Russian wheat deal, winter housing bonus, approaching sales tax increases, expenditures in the U.S. in anticipation of a tax cut, and re-invigoration of the United Kingdom economy brought a surge of expansion over the fourth quarter of 1963 and first quarter of 1964.

## COMPREHENSIVE INDEXES OF PRODUCTION

The set of preliminary indexes covering all the sectors of the Ontario economy is presented in Table I. The year 1955 is selected as the base year because it was a fairly normal year, between the recession of 1954 and the investment boom of 1956-1957. The aggregate production of all goods and services in the exchange economy of Ontario increased by 32.8 per cent from 1955 to 1963, as indicated by *the index of total production* and one-third of that growth has occurred in the past two years. The figures indicate that, although the rate of expansion has varied, there has been no year in which total production declined in Ontario since 1955 despite two national recessions, in 1957-1958 and 1960-1961. There has also been considerable variation in performance among the various industries.

## LEADING, COINCIDENT AND LAGGING INDUSTRIES

Table II shows a comparison of rates of growth among the several industries over different intervals. Four industries, comprising 24 per cent of the total production of goods and services in 1955 achieved leading (above average) growth rates over the period 1955-1963. The most powerful thrust was in



TABLE I

PRELIMINARY INDEXES OF VOLUME OF PRODUCTION OF GOODS AND SERVICES  
IN ONTARIO, 1955-1963  
(1955 = 100)

	1955	1956	1957	1958	1959	1960	1961	1962	1963
<b>GOODS SECTOR</b>									
<b>EXTRACTIVE GOODS</b>									
Agriculture	100.0	105.2	109.8	122.3	115.7	118.8	127.1	132.4	128.7
Forestry	100.0	101.4	104.2	89.2	98.1	99.9	91.1	98.2	104.8
Fishing and trapping	100.0	95.9	89.9	86.2	62.5	61.1	72.6	78.8	83.4
Mining	100.0	108.2	130.4	144.5	175.0	172.6	158.5	148.6	143.1
Total extractive goods	100.0	105.4	113.8	124.0	127.2	128.9	130.5	132.5	129.4
<b>SECONDARY GOODS</b>									
Manufacturing	100.0	108.0	107.8	103.7	113.3	110.2	114.2	124.4	132.8
Construction	100.0	113.2	126.1	136.9	118.8	112.8	113.4	117.6	119.4
Electric power and gas utilities	100.0	106.2	112.7	122.4	135.8	147.4	161.0	169.9	180.6
Total secondary goods	100.0	108.5	110.3	109.0	115.1	112.6	116.6	125.8	133.2
Total production of goods	100.0	107.9	111.0	111.8	117.4	115.6	119.2	127.0	132.5
<b>SERVICE SECTOR</b>									
Transportation, storage and communication	100.0	112.7	111.3	107.3	115.6	115.9	120.1	124.0	131.7
Trade (wholesale and retail)	100.0	110.1	110.4	111.8	118.5	119.1	120.8	127.0	130.3
Finance, insurance and real estate	100.0	102.9	112.1	115.6	121.5	125.5	130.4	134.4	142.7
Public administration and defence	100.0	101.0	104.0	108.7	110.4	111.5	116.2	119.6	120.1
Service (community, recreation, business and personal)	100.0	105.7	109.6	112.3	117.9	128.1	129.3	132.1	136.3
Total production of services	100.0	106.9	109.9	111.6	117.6	120.8	123.9	128.2	133.1
<b>TOTAL PRODUCTION OF GOODS AND SERVICES</b>	100.0	107.4	110.5	111.7	117.4	118.0	121.3	127.6	132.8
Total non-agricultural economy	100.0	107.6	110.5	110.9	117.6	117.9	120.9	127.2	133.1
Total "business" economy <sup>(1)</sup>	100.0	107.8	110.9	111.9	117.9	118.4	121.7	128.1	133.5
Total "business" non-agricultural economy	100.0	108.0	111.0	111.1	118.1	118.4	121.3	127.7	133.9

<sup>(1)</sup>For the purpose of this report, total "business" economy is defined as total production of goods and services less public administration and defence.

TABLE II

COMPARISON OF ANNUAL RATES OF GROWTH IN THE INDUSTRIES  
IN THE ONTARIO ECONOMY, SELECTED PERIODS

	Compound Annual Rates			Annual % Changes	
	1955-63	1956-59	1959-63	1955-56	1962-63
<b>LEADING GROWTH INDUSTRIES</b>					
Electric power and gas utilities	7.7	8.6	7.4	6.2	6.3
Mining	4.6	17.4	-4.3	8.2	-3.7
Finance, insurance and real estate	4.5	5.7	4.1	2.9	6.2
Services (community, recreation, business and personal)	4.0	3.7	3.7	5.7	3.2
<b>COINCIDENT GROWTH INDUSTRIES</b>					
Manufacturing	3.6	1.6	4.0	8.0	6.7
Transportation, storage and communication	3.5	0.8	3.3	12.7	6.2
Trade (wholesale and retail)	3.4	2.5	2.4	10.1	2.6
<b>LAGGING INDUSTRIES</b>					
Agriculture	3.2	3.2	3.7	5.2	-2.8
Public administration and defence	2.3	3.0	2.1	1.0	0.4
Construction	2.2	1.6	0.1	13.2	1.5
Forestry	0.1	-1.1	1.7	1.4	6.7
<b>DECLINING INDUSTRY</b>					
Fishing and trapping	-1.9	-10.4	7.5	-4.1	5.9
<b>AGGREGATES</b>					
Total production of goods and services	3.6	3.0	3.1	7.4	4.1
Total non-agricultural economy	3.6	3.0	3.1	7.6	4.6
Total "business" economy	3.7	3.0	3.2	7.8	4.3
Total "business" non-agricultural economy	3.7	3.0	3.2	8.0	4.9
Total production of goods	3.6	2.8	3.1	7.9	4.3
Total extractive goods	3.3	6.4	0.4	5.4	2.3
Total secondary goods	3.6	2.0	3.7	8.5	5.9
Total production of services	3.6	3.2	3.2	6.9	3.8



electric power and gas utilities, owing primarily to the displacement of coal as a source of energy and heat in the economy. As indicated in Table I, the leading rate for mining was established in the first half of the period. The mainspring for that surge was the rapid development in uranium, and with the subsequent cancellation of U.S. contracts the industry was turned downward. Finance, insurance and real estate has shown a consistently rapid rate of expansion since 1956. The leading rate for the service industry reflected very strong growth in education and health services, and in business services. Recreation services have been declining for over a decade.

The coincident (about average) growth industries contributed over 55 per cent of the economy's total production of goods and services in 1955. Two of the coincident industries have had marked fluctuations in rate of expansion. Manufacturing, which will be discussed in more detail in a later section, went through a period of slow and uneven growth from 1956 to 1961, but has recently accelerated strongly, as has transportation, storage and communication. Transportation is particularly dependent upon the rate of activity in manufacturing and the movement of grain. Trade averaged out at a

more or less coincident rate, as one would expect, because it is the second largest industry in the economy (see Table III), and much of the activity in other industries would be reflected through wholesale and retail trade.

The four lagging industries comprised 19 per cent of the total economic output in 1955. The agricultural industry reflects the mixture of cycles in grain, hogs, cattle, fruit, vegetables, poultry, and dairy farming, and the degree of coincidence among them. Construction is dependent upon the investment cycles in housing, manufacturing, mining, public utilities, office buildings, shopping plazas, roads, canals, schools, hospitals and many others. Since the boom in 1956-1957, it has been stagnant in Canada and the United States until this year, and as a consequence, its relative contribution has declined significantly. Forestry in Ontario is primarily dependent upon the newsprint industry and the vagaries in its export markets, exaggerated by inventory shifts, so that it experiences marked fluctuations. Public administration and defence has declined considerably in relative contribution to direct economic output in Ontario.

Fishing and trapping declined over the period, primarily because fishing was restrained by the increase in predators in the lakes.

TABLE III

INDUSTRIAL DISTRIBUTION OF TOTAL PRODUCTION IN ONTARIO, 1955 AND 1963			
	% of Total Output		% Growth
	1955	1963	1955-1963
GOODS SECTOR			
EXTRACTIVE GOODS			
Agriculture	6.7	6.5	28.7
Forestry	0.9	0.7	4.8
Fishing and trapping	0.1	0.07	-16.6
Mining	2.3	2.5	43.1
Total extractive goods	10.1	9.8	29.4
SECONDARY GOODS			
Manufacturing	34.5	34.5	32.8
Construction	5.8	5.2	19.4
Electric power and gas utilities	2.8	3.8	80.6
Other goods	1.1	0.9	0.3
Total secondary goods	44.2	44.3	33.2
Total goods sector	54.3	54.2	32.5
SERVICE SECTOR			
Transportation, storage and communication	7.0	6.9	31.7
Trade (wholesale and retail)	13.9	13.7	30.3
Finance, insurance and real estate	10.1	10.9	42.7
Public administration and defence	5.9	5.3	20.1
Services (community, recreation, business and personal)	8.9	9.1	36.3
Total service sector	45.7	45.8	33.1
Total goods and services	100.0	100.0	32.8
Total non-agricultural economy	93.3	93.5	33.1
Total "business" economy	94.1	94.7	33.5
Total "business" non-agricultural economy	87.4	88.2	33.9

# THE STRUCTURE OF THE ONTARIO ECONOMY

The figures in Table III indicate that despite the marked variations in growth rates among the various industries in the Ontario economy, there has been very little change in the relative positions of the three major sectors: extractive goods, secondary goods, and the service (or tertiary) sector.

The relative contraction of the extractive goods sector was modified by the enormous enlargement of the mining industry early in the period. The relative expansion of the secondary goods sector was restrained by the stagnation in construction, while the relative enlargement of the service sector was retarded by the lag in public administration and defence.

The only notable changes in Ontario's economic structure have been the rising importance of electric power and gas utilities and finance, insurance and real estate, and the declining proportions for public administration and defence and construction, over the period 1955 to 1963.

## COMPARISON OF THE ONTARIO AND UNITED STATES ECONOMIES

It is not usual to compare the Province of Ontario with the United States, but such a comparison in this instance helps to make clear the nature of the structure of the Ontario economy and the significance of its changes. Since the Ontario economy is integrated

and well-rounded, it can stand the comparison with the United States, which is generally considered to be the model of an industrialized and well-rounded economy.

The statistics in Table IV show that the Ontario economy is oriented more around the production of goods, particularly manufacturing, agriculture, forestry and construction, than is the United States economy. Commodity production provided 53.3 per cent of the Ontario total in 1963, compared to 42.5 per cent in the United States. Furthermore, the structural difference appears to have been increasing recently, as goods production has been rising faster than services in Ontario, but services have had the faster rate in the United States since 1960. Goods production is also rising faster in Ontario than in the United States, but Ontario services are lagging behind the growth rates in the United States.

Another important contrast is found in public administration and defence, which contributes 5.3 per cent of output in Ontario and 7.7 per cent in the United States. In this sector as well, the rate of expansion in Ontario is considerably slower than in the United States, so that the difference in proportions is growing.

It is particularly significant that the manufacturing contribution to the economy is 34.5 per cent in Ontario and only 28.1 per cent in the United States, as it indicates the relative degree to which the On-

TABLE IV  
COMPARISON OF ONTARIO AND UNITED STATES ECONOMIES, 1963

	Percentage Changes				Percentage	
	1960-1963		1962-1963		Distribution in 1963	
	Ontario	U.S.A.	Ontario	U.S.A.	Ontario	U.S.A.
GOODS SECTOR						
EXTRACTIVE GOODS						
Agriculture, forestry and fisheries	8.2	3.6	2.3	3.5	7.3	4.8
Mining	-17.1	6.5	-3.7	2.7	2.5	2.3
Total extractive goods	0.4	4.5	-2.3	3.2	9.8	7.1
SECONDARY GOODS						
Manufacturing	20.5	13.5	6.7	3.3	34.5	28.1
Construction	5.8	0.0	1.5	1.6	5.2	3.9
Electric power and gas utilities	22.6	21.7	6.3	7.7	3.8	3.4
Total secondary goods	18.3	12.6	5.9	3.5	43.5	35.4
SERVICE SECTOR						
Transportation, storage and communication	13.7	13.1	6.2	5.7	6.9	7.2
Trade (wholesale and retail)	9.3	10.8	2.6	4.1	13.7	17.5
Finance, insurance and real estate	13.7	14.5	6.2	5.2	10.9	12.7
Public administration and defence	7.7	9.8	0.4	2.1	5.3	7.7
Services <sup>(1)</sup>	6.4	12.5	3.2	3.7	9.1	10.2
All sectors	10.2	12.0	4.1	3.4	100.0	100.0 <sup>(2)</sup>
Total production of goods	14.6	11.1	4.3	3.5	53.3	42.5
Total production of services	10.2	12.1	3.8	4.2	46.7	55.3

<sup>(1)</sup> Comprises community recreation, business and personal services.

<sup>(2)</sup> Includes 2.2 per cent for government enterprises, rest of the world, and residual.

Source of statistics on the United States economy is "G.N.P. by Major Industries, 1963", Survey of Current Business, Office of Business Economics, U.S. Department of Commerce, September, 1964, p. 19.

TABLE V

PERCENTAGE CHANGES IN VOLUME OF PRODUCTION, 1955 TO 1963, ONTARIO  
AND THE PROVINCES OUTSIDE ONTARIO, BY INDUSTRY

	Ontario	Other Provinces
<b>GOODS SECTOR</b>		
Agriculture	28.7	14.2
Forestry	4.8	11.2
Fishing and trapping	-16.4	22.5
Mining	43.1	63.1
Total extractive goods	29.4	26.9
Manufacturing	32.8	25.4
Construction	19.4	26.7
Electric power and gas utilities	80.6	120.4
Total secondary goods	33.2	30.3
Total goods sector	32.5	28.9
<b>SERVICES SECTOR</b>		
Transportation, storage and communication	31.7	40.7
Trade (wholesale and retail)	30.3	31.8
Finance, insurance and real estate	42.7	42.3
Public administration and defence	20.1	20.7
Services <sup>(1)</sup>	36.3	38.4
Total services sector	33.1	35.6
Total goods and services	32.8	32.0
Total non-agricultural economy	33.1	34.6
Total "business" economy	33.5	32.6
Total "business" non-agricultural economy	33.9	35.4

<sup>(1)</sup>Comprises community, recreation, business and personal services.

TABLE VI

INDUSTRIAL DISTRIBUTION OF PRODUCTION, ONTARIO AND THE PROVINCES  
OUTSIDE ONTARIO, 1955 AND 1963

	Ontario		Other Provinces	
	1955	1963	1955	1963
<b>GOODS SECTOR</b>				
Agriculture	6.7	6.5	12.8	11.0
Forestry	0.9	0.7	2.9	2.4
Fishing and trapping	0.1	0.07	0.6	0.6
Mining	2.3	2.5	5.8	7.1
Total extractive goods	10.1	9.8	22.0	21.2
Manufacturing	34.5	34.5	22.1	21.0
Construction	5.8	5.2	8.0	6.8
Electric power and gas utilities	2.8	3.8	1.8	3.1
Total secondary goods <sup>(1)</sup>	44.2	44.3	32.2	31.7
Total goods sector	54.3	54.2	54.2	52.9
<b>SERVICES SECTOR</b>				
Transportation, storage and communication	7.0	6.9	9.0	9.6
Trade (wholesale and retail)	13.9	13.7	14.2	14.2
Finance, insurance and real estate	10.1	10.9	8.5	9.2
Public administration and defence	5.9	5.3	5.0	4.6
Services <sup>(2)</sup>	8.9	9.1	9.0	9.5
Total services sector	45.7	45.8	45.8	47.1
Total goods and services	100.0	100.0	100.0	100.0
Total non-agricultural economy	93.3	93.5	87.2	88.9
Total "business" economy	94.1	94.7	95.0	95.4
Total "business" non-agricultural economy	87.4	88.2	82.2	84.4

<sup>(1)</sup>Includes "other goods" such as manufacturing repair services and municipal water works.

<sup>(2)</sup>Comprises community, recreation, business and personal services.

NOTE: Components may not sum to totals owing to rounding.



tario economy is dependent upon its manufacturing industry.

From 1960 to 1963 all Ontario's commodity-producing industries except mining advanced more strongly than those in the United States, but in the latter part of that period the United States commodity industries were stronger, except for manufacturing, which increased twice as fast in Ontario.

#### COMPARISON WITH THE REST OF CANADA

Table V shows the percentage changes in volume of production from 1955 to 1963, by industry, for Ontario and for the aggregate of the other nine

provinces. Total production of goods and services increased faster in Ontario over the period, but if we exclude agriculture the rate of growth was higher in the other provinces.

Ontario shows the higher rate of growth in only three industries, most markedly in agriculture and manufacturing but also in finance, insurance and real estate. As in the comparison with the United States, Ontario's strength is found to lie in its manufacturing industries, and the lag in Ontario's public administration and defence sector is clearly indicated here, as well. The other provinces were particularly strong relative to Ontario in forestry, fishing

TABLE VII

#### INDEXES OF PRODUCTION, EMPLOYMENT AND PRODUCTIVITY, ONTARIO AND THE PROVINCES OUTSIDE ONTARIO, 1955-1963 (1955 = 100)

	Index of Production	ONTARIO Index of Employment	Index of Productivity	PROVINCES OUTSIDE ONTARIO Index of Production	Index of Employment	Index of Productivity
1955	100.0	100.0	100.0	100.0	100.0	100.0
1956	107.4	105.2	102.1	109.0	103.5	105.3
1957	110.5	108.2	102.1	106.1	105.8	100.3
1958	111.7	107.0	104.4	107.5	105.6	101.8
1959	117.4	109.7	107.0	113.1	108.8	104.0
1960	118.0	112.3	105.1	115.1	110.2	104.4
1961	121.3	113.5	106.9	116.5	112.3	103.7
1962	127.6	115.8	110.2	124.6	115.9	107.5
1963	132.8	118.9	111.7	132.0	118.4	111.5

TABLE VIII

#### PRELIMINARY INDEXES OF VOLUME OF PRODUCTION OF GOODS AND SERVICES, PROVINCES OUTSIDE ONTARIO, 1955-1963 (1955 = 100)

	1955	1956	1957	1958	1959	1960	1961	1962	1963
<b>GOODS SECTOR</b>									
<b>EXTRACTIVE GOODS</b>									
Agriculture	100.0	108.0	81.7	85.1	87.5	89.3	74.2	91.4	114.2(est.)
Forestry	100.0	106.6	94.5	84.4	95.9	105.5	97.5	104.6	111.2
Fishing and trapping	100.0	106.8	101.2	114.4	104.6	102.1	113.8	128.6	122.5
Mining	100.0	116.3	121.1	116.8	125.2	127.3	140.3	156.9	163.1
Total extractive goods	100.0	110.0	94.2	94.2	99.0	101.7	95.7	111.4	126.9
<b>SECONDARY GOODS</b>									
Manufacturing	100.0	107.5	104.3	105.3	109.1	111.5	113.0	120.4	125.4
Construction	100.0	121.4	124.4	122.6	123.9	118.6	124.3	124.9	126.7
Electric power and gas utilities	100.0	117.3	127.5	138.4	157.2	177.5	185.5	198.3	220.4
Total secondary goods	100.0	111.0	109.9	110.6	114.8	116.4	119.2	125.1	130.3
Total production of goods	100.0	110.6	103.5	103.9	108.4	110.4	109.6	119.5	128.9
<b>SERVICE SECTOR</b>									
Transportation, storage and communication	100.0	111.1	112.2	111.0	122.6	126.1	133.2	139.3	140.7
Trade (wholesale and retail)	100.0	108.7	109.0	111.6	118.5	118.3	119.2	126.0	131.8
Finance, insurance and real estate	100.0	104.2	109.3	113.4	118.4	123.1	127.1	133.7	142.3
Public administration and defence	100.0	102.2	105.3	108.7	113.2	115.5	118.8	120.7	120.7
Service (community, recreation, business and personal)	100.0	106.1	108.5	113.1	118.0	119.6	125.4	131.8	138.4
Total production of services	100.0	107.1	109.2	111.8	118.6	120.7	124.6	130.6	135.6
TOTAL GOODS AND SERVICES	100.0	109.0	106.1	107.5	113.1	115.1	116.5	124.6	132.0
Total non-agricultural economy	100.0	109.1	109.7	110.8	116.8	118.9	122.7	129.5	134.6
Total "private" economy	100.0	109.4	106.2	107.5	113.0	115.1	116.4	124.8	132.6
Total "private" non-agricultural economy	100.0	109.6	110.0	110.9	117.0	119.1	122.9	130.0	135.4

and trapping, mining, electric power and gas utilities, transportation, storage and communication and construction.

Table VI shows the industrial distribution of production in 1955 and 1963 for Ontario and for the other provinces. As in the United States, there has been a shift among the other provinces towards the service sector.

The most apparent differences between Ontario and the other provinces are seen in the relative positions of manufacturing, where Ontario is strong, and of the extractive sector, in the other provinces, which has contributed over a fifth of the total of their production.

Table VII shows the figures for production, employment and productivity, each year from 1955 to 1963, for Ontario and the other provinces. In Ontario, production has expanded each year, and in the other provinces 1957 was the only year of actual decline, although recovery in 1958 was not completed. Employment declined only once, in 1958, for both Ontario and the other provinces. Productivity has risen fairly consistently in Ontario, except for 1960, but the other provinces have lagged in productivity gains, until the past two years of rapid rise in productivity. The reason for this lag in productivity was the lagging rate of growth in output in the other provinces until 1962 and 1963. This lag was the result of weaknesses during 1957-1958 and 1961.

Table VIII shows the production indexes for the various industries in the other provinces during each year of the period 1955 to 1963. The lag in the rate of growth in the other provinces from 1957 through 1961 was the result of weaknesses in agriculture, forestry, construction and manufacturing.

Table IX compares aggregate production and population in Ontario and the other provinces from 1955 to 1963. Output per capita was lower than the 1956 level from 1957 to 1961, but that level has been surpassed and the recent rises have been impressive.

## INDEXES OF MINERAL PRODUCTION IN ONTARIO

Table X shows the annual indexes of mineral production in Ontario from 1949 to 1963. The peak in Ontario mining was reached in 1959, and since then it has declined each year. The main sources of this latter decline have been uranium (classified in miscellaneous minerals) and gold. It will be noted that Ontario mining continued to expand through the recessions of 1954 and 1957-1958.

As will be seen in Table XI, nickel was the most important mineral in 1963, with 18 per cent of total mining, compared to 31 per cent in 1949. Uranium, which was not mined in Ontario in 1949, was second. Gold had declined from second to third place, and copper from third to fourth. Iron ore, sand and gravel, cement, stone and salt all increased their proportions by considerable margins.

Since total mining accounted for only 2.5 per cent of Ontario's total output of goods and services in 1963, and these nine minerals contributed 90 per cent of total mining, it is clear that the remaining minerals each contributed only small proportions to Ontario's economy.

Table XII, classifies Ontario's minerals according to degree of growth from 1949 to 1963. Salt, which is increasingly used for ice control on streets and highways, achieved the second highest rate of growth. The shift from coal to other sources of energy and heat, and the opening of new sources in Ontario, is indicated by the growth in crude petroleum and natural gas. The opening of new mineral sources is also reflected in iron ore mining. Sand and gravel, stone and cement have held up very well despite the lethargy in construction since 1958.

The declining minerals in Ontario in recent years have been nickel, gold, cobalt, copper, the platinum group, quartz and calcium, along with uranium. These minerals are particularly important for local communities in Northern Ontario.

TABLE IX

### INDEXES OF PRODUCTION, POPULATION AND PER CAPITA OUTPUT, ONTARIO AND THE PROVINCES OUTSIDE ONTARIO, 1955-1963 (1955 = 100)

	ONTARIO			PROVINCES OUTSIDE ONTARIO		
	Index of Production	Index of Population	Index of Per Capita Output	Index of Production	Index of Population	Index of Per Capita Output
1955	100.0	100.0	100.0	100.0	100.0	100.0
1956	107.4	102.6	104.7	109.0	102.3	106.6
1957	110.5	107.0	103.3	106.1	105.2	100.9
1958	111.7	110.5	101.1	107.5	107.9	99.6
1959	117.4	113.4	103.5	113.1	110.4	102.4
1960	118.0	116.0	101.7	115.1	112.7	102.1
1961	121.3	118.4	102.4	116.5	115.0	101.3
1962	127.6	120.4	106.0	124.6	117.2	106.3
1963	132.8	122.4	108.5	132.0	119.3	110.6

TABLE X

## INDEXES OF MINERAL PRODUCTION IN ONTARIO

(1949 = 100)

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
LEADING MINERALS: TOTAL	100.0	102.7	112.4	114.1	114.4	123.0	135.0	143.7	154.3	138.0	164.6	175.1	171.2	164.4	157.6
Calcium	100.0	—	—	—	—	—	—	75.9	42.5	4.8	13.0	25.9	19.1	23.7	15.3
Cobalt	100.0	94.3	153.7	229.7	258.9	363.9	532.5	548.0	605.8	393.5	458.1	526.3	465.9	427.9	333.6
Copper	100.0	103.7	113.9	110.9	115.5	124.5	129.5	138.2	151.9	125.6	166.5	182.5	187.2	167.2	159.3
Gold	100.0	105.4	104.6	106.8	92.7	100.3	107.2	106.8	109.5	115.4	114.0	116.1	112.0	102.8	98.8
Iron ore	100.0	121.1	141.3	135.1	140.8	120.1	216.8	276.3	241.9	181.2	299.1	264.7	286.9	318.9	340.2
Nickel	100.0	96.1	107.2	109.2	111.7	122.8	125.2	130.2	137.8	98.8	135.2	156.7	152.5	129.4	115.9
Platinum groups	100.0	81.3	94.8	83.3	90.4	102.3	114.5	93.7	123.9	89.4	97.7	144.0	124.5	140.1	102.6
Silver	100.0	172.0	176.4	253.3	201.1	212.4	236.1	258.6	269.6	383.0	411.3	437.8	346.1	366.1	387.3
Gypsum	100.0	98.1	129.2	137.3	164.6	175.9	180.3	180.6	186.8	209.5	202.8	175.0	209.3	214.2	214.1
Quartz	100.0	98.8	110.0	101.8	103.3	105.2	101.2	111.9	113.3	65.7	114.0	118.2	109.7	96.3	78.1
Salt	100.0	114.7	127.2	119.7	123.4	120.7	164.5	222.0	253.4	350.2	500.0	495.3	471.3	519.7	531.0
Natural gas	100.0	99.8	105.2	103.5	121.0	124.8	135.3	159.7	179.5	201.2	209.9	211.7	181.3	195.0	208.7
Petroleum, crude	100.0	96.2	75.6	73.6	115.0	158.2	201.6	227.6	239.3	298.6	384.2	385.6	440.8	435.2	460.4
Clay products	100.0	109.1	116.8	138.8	152.5	169.5	168.0	161.2	169.6	190.0	175.2	177.7	175.1	183.0	210.9
Cement	100.0	115.5	118.2	121.3	153.9	156.7	166.6	180.2	274.8	298.2	296.5	249.4	276.7	311.9	314.6
Lime	100.0	107.8	116.9	117.4	124.4	115.2	131.7	127.1	144.6	190.6	213.2	186.8	163.2	171.9	181.7
Sand and gravel	100.0	135.6	175.7	194.5	195.6	208.0	230.7	275.2	296.3	302.3	331.4	347.9	314.5	343.2	350.0
Stone	100.0	101.2	143.0	145.5	156.1	179.5	225.5	294.2	307.8	278.9	306.0	317.5	325.0	332.7	324.5
Others <sup>(1)</sup>	100.0	87.4	96.9	97.1	127.6	142.2	170.3	186.4	204.6	204.5	257.6	276.1	267.4	299.7	314.5
MISCELLANEOUS MINERALS <sup>(2)</sup>	100.0	897.6	2,017.1	2,368.3	2,465.9	2,107.3	2,268.3	3,758.5	14,590.2	33,792.7	42,280.5	34,902.4	26,436.6	22,709.8	22,246.3
TOTAL MINERAL PRODUCTION	100.0	104.2	115.9	118.3	118.8	126.7	139.0	150.4	181.2	200.9	243.2	239.9	220.3	206.5	198.9

<sup>(1)</sup> Includes Selenium, Tellurium, Arsenious Oxide, Mica, Nepheline Syenite, Peat Moss, Soapstone, Talc, Pyrophyllite, Sulphur in smelter gas.

<sup>(2)</sup> Includes all the minerals not included in the "Leading Minerals" groups. The most prominent of these are Uranium, Zinc, Magnesium and Asbestos weighing 84.9, 5.8, 4.2 and 4.1 per cent respectively, within the miscellaneous group. This group comprises minerals that were not produced continuously throughout the period since 1949 to date.



TABLE XI

THE STRUCTURE OF THE ONTARIO MINING INDUSTRY		
	Percentage of Total	
	1949	1963
TOTAL LEADING MINERALS	99.8	79.1
Calcium	0.3	0.03
Cobalt	0.3	0.5
Copper	14.1	11.3
Gold	26.7	13.3
Iron ore	4.2	7.1
Nickel	31.2	18.2
Platinum group	6.3	3.2
Silver	0.6	1.2
Gypsum	0.3	0.3
Quartz	0.3	0.1
Salt	1.1	2.9
Natural gas	1.0	1.1
Petroleum, crude	0.3	0.7
Clay products	2.3	2.5
Cement	2.9	4.6
Lime	1.8	1.6
Sand and gravel	3.5	6.2
Stone	2.3	3.8
Others	0.4	0.7
MISCELLANEOUS MINERALS	0.2	20.9
TOTAL MINERAL PRODUCTION	100.0	100.0

TABLE XII

ONTARIO'S LEADING, COINCIDENT, LAGGING AND DECLINING MINERALS		
	Percentage Changes	
	1949-1963	1955-1963
LEADING GROWTH MINERALS		
Miscellaneous Minerals	21,246.3	880.7
Salt	431.0	222.8
Petroleum, crude	360.4	128.4
Silver	287.3	64.0
Sand and gravel	250.0	51.7
Iron ore	240.2	56.9
Cobalt	233.6	-37.4
Stone	224.5	43.9
Cement	214.6	88.8
Others	214.5	28.4
COINCIDENT GROWTH INDUSTRIES		
Gypsum	114.1	18.7
Clay products	110.9	25.5
Natural gas	108.7	54.2
LAGGING MINERALS		
Lime	81.7	38.0
Copper	59.3	23.0
Nickel	15.9	-7.4
Platinum Group	2.6	-10.4
DECLINING MINERALS		
Gold	-1.2	-7.8
Quartz	-21.9	-22.8
Calcium	-84.7	-78.8
TOTAL MINERAL PRODUCTION	98.9	43.1

#### INDEXES OF MANUFACTURING PRODUCTION IN ONTARIO

The indexes of manufacturing production in this section omit three important industrial groups: tobacco and tobacco products, products of petroleum and coal and miscellaneous manufacturing industries. The set of manufacturing indexes is prepared on a monthly basis, and monthly statistics are not available for the above three groups. However, these three comprise only a small proportion (5.8 per cent in the weight-base year) of Ontario's total manufacturing output, and aggregates of the 14 remaining large groups are important indicators for the Ontario economy.

Table XIII shows the annual averages of the monthly indexes for the 14 groups and three aggregates

during the years 1956 to 1963 and, for comparison purposes, the first half-years of 1963 and 1964. The year 1956 has been selected as the base year in order to show clearly the movements in the various groups in comparison with a prosperous year in which durables groups participated fully in economic expansion.

Table XIV shows that Ontario manufacturing (excluding the three groups mentioned previously) expanded by only 1.7 per cent from 1956 to 1959. In the next three years it expanded by 10.1 per cent, or a little better than 3 per cent per annum. Then in 1963 expansion amounted to 7.0 per cent and from the first half of 1963 to the first half of 1964 it rose to 11.3 per cent. The immediate source of the slow growth from 1956 to 1959 was the decline in

TABLE XIII

ONTARIO INDEX OF PRODUCTION IN MANUFACTURING <sup>(1)</sup> (1956 = 100)										
	1956	1957	1958	1959	1960	1961	1962	1963	First Half 1963	First Half 1964
TOTAL MANUFACTURING <sup>(2)</sup>	100.0	97.8	95.6	101.7	100.4	102.6	112.0	119.8	118.0	131.3
Total Non-durables <sup>(3)</sup>	100.0	102.1	104.1	108.2	110.3	112.8	119.2	125.0	121.0	131.8
Total Durables	100.0	94.7	89.4	97.1	93.2	95.2	106.7	116.0	116.0	131.8
NON-DURABLE GOODS										
Foods and beverages	100.0	102.0	107.8	112.7	114.0	116.7	119.5	122.7	111.7	118.4
Rubber products	100.0	97.0	92.3	109.0	94.0	94.0	108.0	121.7	124.6	141.0
Leather products	100.0	104.0	104.5	109.0	102.7	114.7	118.2	119.4	123.8	130.3
Textiles	100.0	101.2	92.9	103.2	95.0	103.4	114.4	122.4	121.9	135.6
Clothing	100.0	98.9	96.0	93.4	87.2	83.3	88.2	93.1	91.6	98.2
Paper products	100.0	102.0	103.6	109.3	111.8	114.3	119.2	123.0	119.3	130.5
Printing and publishing	100.0	100.0	97.3	103.3	105.1	107.7	111.3	113.5	111.8	120.5
Chemical products	100.0	107.3	116.8	122.2	131.3	133.0	145.3	156.4	155.1	172.8
DURABLE GOODS										
Wood products	100.0	94.7	97.1	101.2	97.2	92.2	110.3	116.3	113.9	123.9
Iron and steel products	100.0	96.3	90.5	106.5	98.7	100.7	110.3	117.8	116.6	129.2
Transportation equipment	100.0	89.1	79.9	76.4	72.9	73.5	92.2	115.8	124.0	153.6
Non-ferrous metal products	100.0	98.7	91.2	105.3	112.4	114.5	114.2	109.5	110.2	118.4
Electrical apparatus and supplies	100.0	93.6	88.7	90.7	87.5	89.8	104.4	112.9	108.5	116.4
Non-metallic mineral products	100.0	100.6	107.8	114.9	107.4	113.2	126.7	127.5	114.6	128.4

<sup>(1)</sup> Three industrial groups in the non-durables sector are omitted: tobacco and tobacco products, products of petroleum and coal, and miscellaneous manufacturing industries.

<sup>(2)</sup> Total for the 14 industrial groups listed below.

<sup>(3)</sup> Total for the 8 industrial groups listed under non-durables.

TABLE XIV

LEADING, COINCIDENT, LAGGING AND DECLINING GROUPS IN ONTARIO MANUFACTURING						
	Seven-Year Percentage Changes 1956-1963	Three-Year Percentage Changes 1956-1959	Three-Year Percentage Changes 1959-1962	One-Year Percentage Changes 1962-1963	1st H 1963 1st H 1964	
LEADING GROWTH GROUPS						
Chemicals and allied products	56.4	22.2	18.9	7.6	11.4	
Non-metallic mineral products	27.6	14.9	10.3	0.6	12.1	
COINCIDENT GROWTH GROUPS						
Paper products	23.0	9.3	9.1	3.2	9.4	
Foods and beverages	22.7	12.7	6.0	2.7	6.0	
Textiles	22.4	3.2	10.9	7.3	11.2	
Rubber products	21.7	9.0	- 0.9	12.7	13.2	
Leather products	19.4	9.0	8.4	1.0	5.3	
LAGGING GROUPS						
Iron and steel products	17.8	6.5	3.6	6.8	10.8	
Wood products	16.3	1.2	9.0	5.4	8.8	
Transportation equipment	15.8	-25.6	20.7	25.6	23.9	
Printing and publishing	13.5	3.3	8.1	2.0	7.8	
Electrical apparatus and supplies	12.9	- 9.3	15.1	8.1	7.2	
Non-ferrous metal products	9.5	5.3	8.5	- 4.1	7.5	
DECLINING GROUP						
Clothing	- 6.9	- 6.4	- 5.6	5.6	7.2	
TOTAL MANUFACTURING	19.8	1.7	10.1	7.0	11.3	
Total durables	16.0	- 2.9	9.9	8.7	13.0	
Total non-durables	25.0	8.2	10.2	4.9	8.9	
TOTAL PRODUCTION OF GOODS AND SERVICES IN ONTARIO	23.7	9.3	8.7	4.1	N.A.	

YEAR-OVER-YEAR PERCENTAGE CHANGES IN ONTARIO MONTHLY INDEXES OF MANUFACTURING PRODUCTION,  
BY MONTHS, 1963 TO 1964

## NON-DURABLES GROUPS



the great cyclical industries: transportation equipment and electrical apparatus and supplies, and the immediate source of the acceleration over the next three years was the revival of these cyclical industries. It will be noted that manufacturing lagged far behind the general economy from 1956 to 1959, but since 1962 it has led the general economy. From 1956 to 1963, manufacturing expanded 19.8 per cent and the general economy 23.7 per cent.

Among the 14 industrial groups in the manufacturing index, the leading growth group has been chemicals and allied products. The leading position reflects import replacement and the introduction of new products. Although non-metallic mineral products had a leading growth rate among manufacturing industries, its rate was actually only about 3.5 per cent annually compounded from 1955 to 1963, so its position is more an indication of slow growth in manufacturing in general than an indication of special strength for itself during this period.

The coincident (about average) growth category includes the export-oriented paper products groups and four domestically-oriented non-durables groups. The recent faster growth in rubber products was particularly induced by the acceleration in the motor vehicle industry.

The lagging (less than average growth) groups are all durables except printing and publishing. The latter group is related to population and advertising, so it has languished in a slow-growth period. The five lagging durables groups are cyclical industries, and they reflect the recent acceleration in the economy.

The declining group is clothing, but it will be noted that its long period of decline in Ontario was arrested during this cycle, for it expanded by 11.8 per cent from 1961 to 1963.

Table XV shows the percentage changes from the year-ago-month, for each of the 18 months from January 1963 to June 1964, for the three aggregates (total manufacturing,<sup>(1)</sup> total non-durables,<sup>(1)</sup> and total durables) and for each of the 14 industrial groups. These statistics bring us closer to the present.

The percentage changes clearly show the acceleration in manufacturing during the fourth quarter of 1963 and the first quarter of 1964. Strong growth is particularly noticeable for total durables, reflecting especially the high rates in transportation equipment, iron and steel products, non-metallic minerals and wood products, the latter three being highly dependent upon construction. Paper products, rubber products and textiles have also been strong, and the revival of industry has been reflected in the surge in chemical products. The general expansionary environment even penetrated through to the clothing and leather industries as well as to the usually steady foods and beverages.

The declining percentage changes for May and June this year clearly reflect the deceleration in the economy following the surges in the fourth quarter of 1963 and the first quarter of 1964.

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<sup>(1)</sup> It will be recalled that these two aggregates exclude tobacco and tobacco products, products of petroleum and coal, and miscellaneous manufacturing industries.

# APPENDIX

## NOTES ON THE CONSTRUCTION OF THE INDEXES

### COMPREHENSIVE INDEXES OF PRODUCTION

The agricultural index is that published by D.B.S., on the basis of 1949 = 100 (with the base converted arithmetically to 1955), as published in *Index of Farm Production*, 1963.

The index for forestry is an index of volume of forest production in Ontario as published by D.B.S. in *Logging*, 1961.

The index of mining will be discussed later.

The indexes for fishing and trapping, manufacturing and construction are based on Ontario's proportion of Canada's net value of production, as published by D.B.S. in *Survey of Production*, 1961.

The remaining indexes are computed by applying Canada productivity ratios to Ontario employment and then (except for public administration and defence) adjusting the resulting index by a wage and salary differential factor, which is assumed to reflect differences in productivity between Ontario and Canada. The other exception is finance, insurance and real estate, in which the real estate component is segregated and calculated by assuming the Ontario real estate component relates to personal income in the same manner as Canada's, and is then combined with the index for finance and insurance, which is calculated in the manner described previously.

The weights for 1955 are calculated similarly. For agriculture, forestry, fishing and trapping, mining, manufacturing and construction, the weights are derived from Ontario's proportion of Canada's net value of production. For the remaining weights, Ontario's proportion of Canada is derived from employment ratios adjusted for the wage and salary differential.

These Ontario proportions of Canada are applied to Canada's Real Gross Domestic Product at Factor Cost in constant 1949 dollars to obtain amounts for Ontario, which are summed and calculated as proportions of Ontario's total output to obtain weights.

The indexes are applied to these 1955 weights each year to calculate the aggregate indexes.

In calculating the indexes for the other provinces, the Ontario 1955 share of Canada's Real GDP in constant 1949 dollars is multiplied by the successive respective indexes and the derived amounts are subtracted from Canada to obtain the shares for other provinces, which are then expressed in index form.

All these weights and indexes are preliminary, and subject to revision on the basis of more reliable data that we hope to obtain from D.B.S. in the future — data which also will probably permit the use of improved methods.

### INDEXES OF MINERAL PRODUCTION

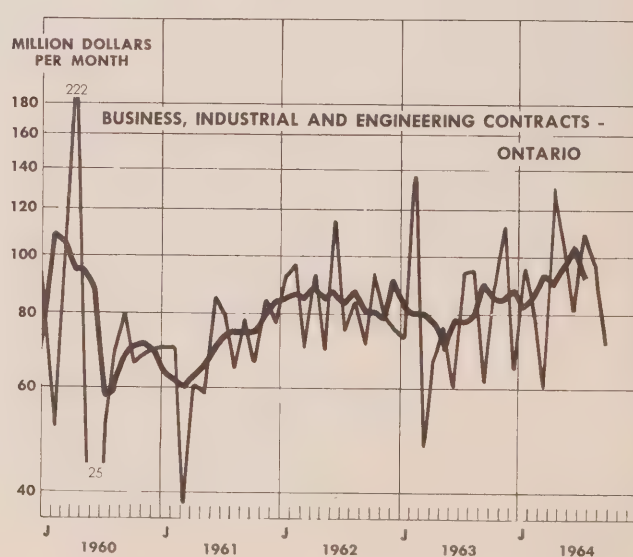
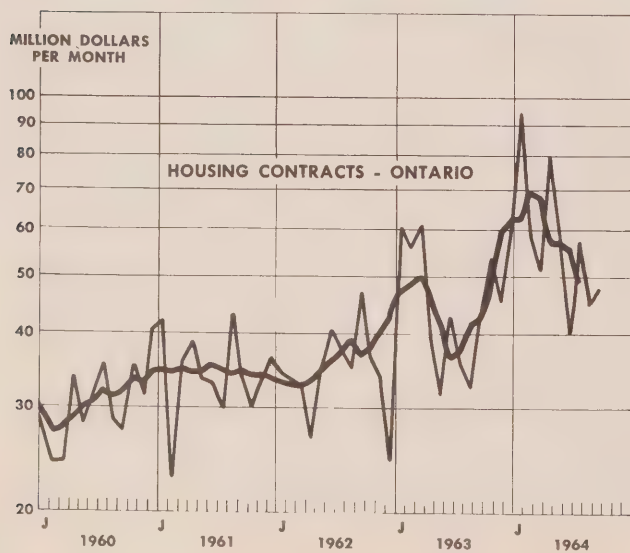
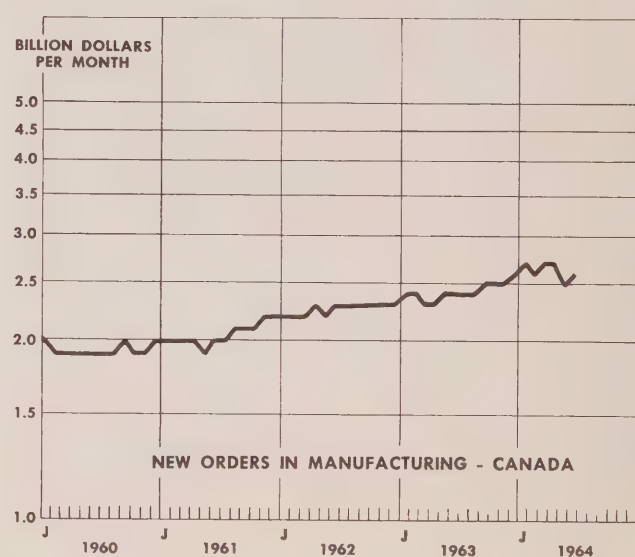
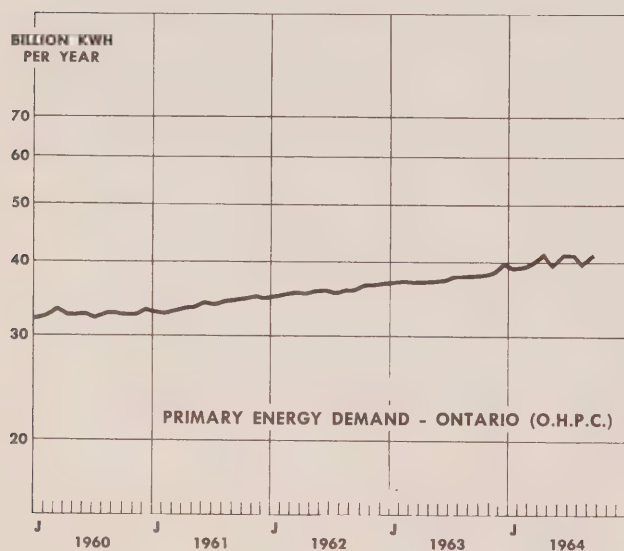
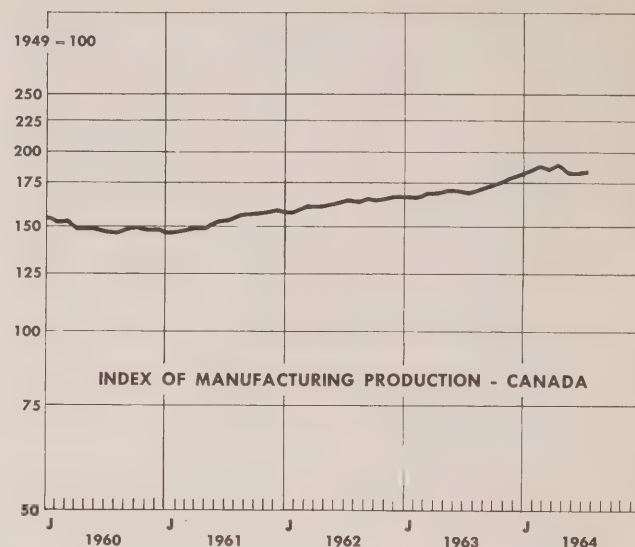
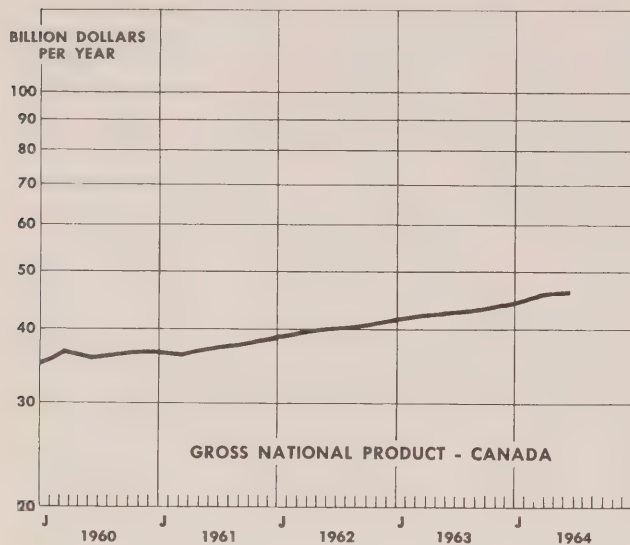
The weights for 1949 are calculated from the gross value of production figures published by D.B.S. in *General Review of the Mining Industry*. The annual indexes are the relatives to the 1949 base for physical volume of output, such as tons of iron ore. The annual indexes are applied to the weights and summed to obtain aggregate indexes. The sources for the indexes are the data published by D.B.S. in the *General Review of the Mining Industry*, years to 1961, and the *Preliminary Report on Mineral Production*, 1962 and 1963.

### THE INDEXES OF MANUFACTURING PRODUCTION

For each of the 14 groups included in the overall index, the respective monthly index is calculated by applying the Canada output per man-hour ratio to Ontario man-hours. The data are obtained from *Index of Industrial Production*, *Employment and Payrolls*, and *Man-hours and Hourly Earnings*, all published by D.B.S.

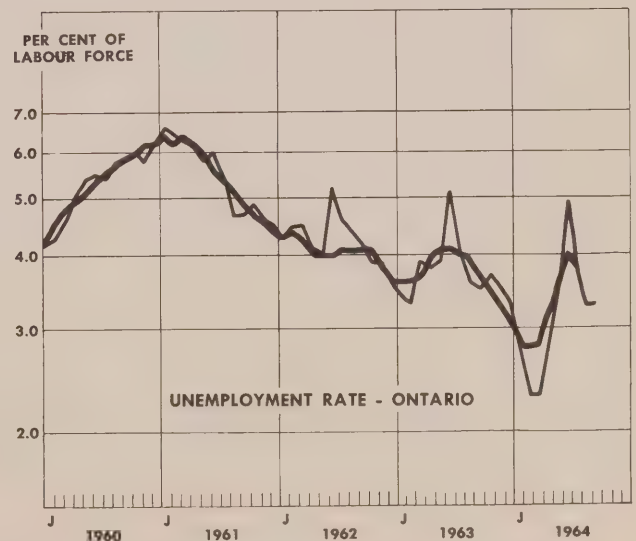
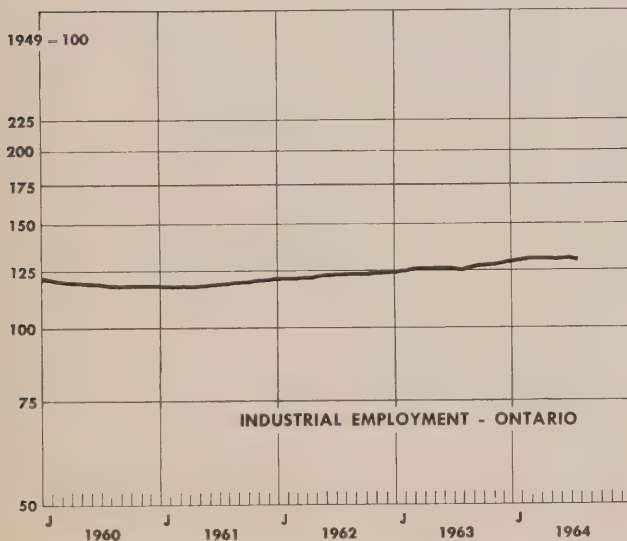
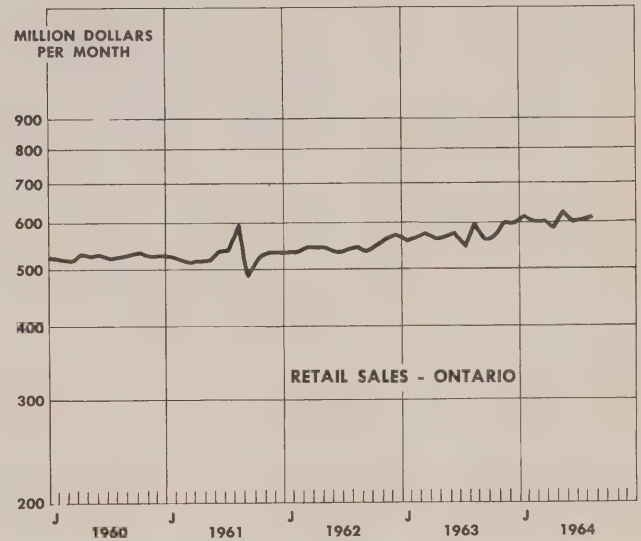
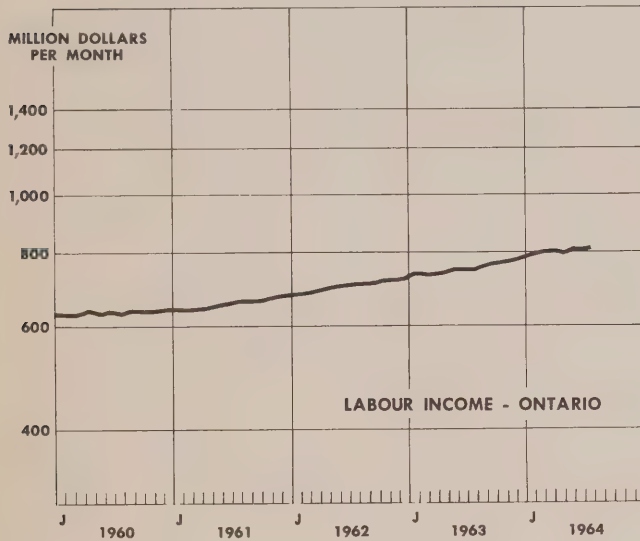
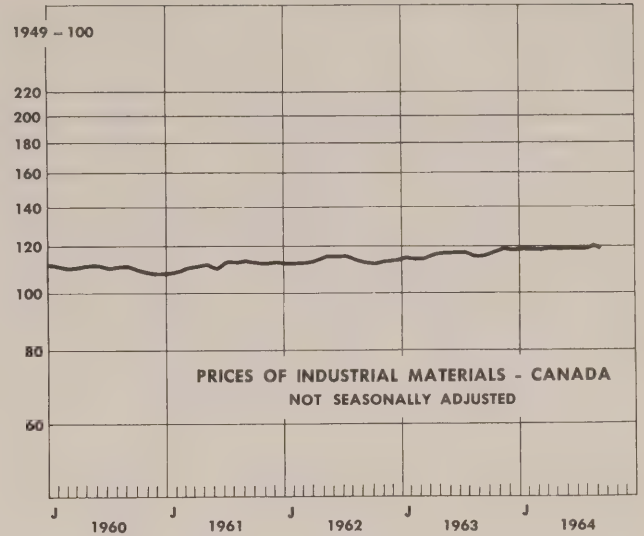
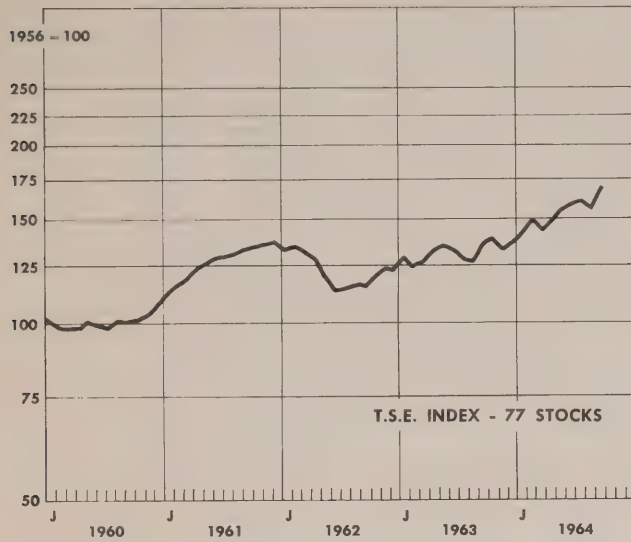
The 1956 weights are derived from the net value of production figures published by D.B.S. in *Manufacturing Industries of Canada*, Section D, Province of Ontario, 1956.

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED





# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES

ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED  
(\* Figures for Canada)

LEADING INDICATORS

Average Weekly Hours Worked in Manufacturing  
Business Failures - Number  
Business Failures - Liabilities  
New Orders in Manufacturing\*  
T.S.E. Index - 77 Stocks  
New Dwelling Units Starts  
Housing Contracts  
Business, Industrial and Engineering Contracts  
Money Supply\*

	August	September	October	November	December	January	February	March	April	May	June	July	August	September
(No.)	40.6	40.8	40.9	41.5	40.6	41.6	41.4	40.9	41.1	41.3	41.1	40.9	81	77
\$ 000	84	98	97	92	103	73	81	61	75	80	102	95	2,738	8,578
\$ Million	3,606	6,902	4,473	5,139	5,194	3,494	1,574	2,194	6,754	11,965	12,832	10,424		
1956=100	2,421	2,511	2,518	2,501	2,629	2,676	2,560	2,699	2,686	2,507	2,549	2,583		
(No.)	127.1	135.9	138.0	133.1	136.1	140.5	138.7	143.3	148.6	155.3	158.9	160.5	156.6	169.6
\$ Million	4,219	3,624	4,421	3,399	5,694	5,470	4,899	3,676	4,136	4,087	4,238	5,213	4,626	47.7
	32.7	43.6	53.8	45.4	60.8	94.5	58.8	51.5	80.0	56.9	40.1	57.6	44.9	
\$ Million	94.9	61.7	89.1	112.6	64.9	95.5	78.8	60.1	130.3	104.9	81.5	109.6	97.5	71.8
\$ Million	16,081	16,165	16,434	16,522	16,612	16,797	16,758	16,863	17,003	17,095	17,211	17,364	17,430	

COINCIDENTAL AND LAGGING INDICATORS

Gross National Product\*

\$ Million	43,076	44,332	45,512	46,000
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Total Industrial Production\*

1949=100	194.9	198.1	200.2	203.5	207.7	210.8	212.3	210.2	214.7	209.4	211.2	211.0		
Total Manufacturing	173.4	175.4	177.4	180.2	183.5	185.2	188.6	186.3	190.4	185.6	185.7	186.0		
Non-Durables	173.8	173.7	175.2	175.9	180.1	179.7	184.2	180.1	185.5	180.9	183.3	180.9		
Durables	172.9	177.4	179.9	185.2	187.6	191.6	193.8	193.6	196.1	191.0	188.5	191.9		
Mining	289.4	300.8	303.0	305.1	311.8	335.2	324.9	317.3	321.0	321.1	328.7	318.6		
Electric Power & Gas Utilities	365.9	372.8	376.3	390.6	403.8	391.2	384.3	396.4	409.3	384.5	403.5	414.4		

Cheques Cashied in Clearing Centres

\$ Million	3,220	3,236	3,269	3,301	3,278	3,470	3,763	3,754	3,540	3,705	3,749	608	611	
\$ Million	594	560	566	597	599	612	600	603	584	621	602	812		
\$ Million	759	761	767	771	781	790	795	800	798	803	809	2,582	2,574	2,549
000's	2,479	2,474	2,489	2,490	2,512	2,490	2,492	2,521	2,513	2,530	2,583	2,487	2,488	2,464
Employed	2,390	2,388	2,397	2,403	2,430	2,420	2,435	2,462	2,440	2,442	2,457	95	86	85
Unemployed	89	86	92	87	82	70	57	59	73	88	126	95		

Unemployed as % of Labour Force

%	3.6	3.5	3.7	3.5	3.3	2.8	2.3	2.3	2.9	3.5	4.9	3.7	3.3	3.3
1949=100	127.1	128.2	128.3	129.2	129.8	130.7	131.5	132.1	131.5	131.4	132.6	131.4		

Industrial Employment

\$	2.05	2.07	2.07	2.09	2.10	2.09	2.09	2.11	2.10	2.11	2.13	2.13		
Primary Energy Demand - OHPC	37.78	37.84	37.92	38.34	39.85	38.84	38.97	39.88	41.25	39.33	40.98	41.01	39.79	41.08
New Dwelling Unit Completions	3,382	3,318	3,652	2,879	3,050	2,641	4,495	10,184	6,240	3,454	3,095	4,876	3,758	

ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED

Prices, Industrial Materials\*

1935-39=100	251.4	251.0	254.9	258.8	257.5	259.5	258.6	257.1	258.8	258.7	257.8	257.3	259.9	260.7
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Domestic Exports\*

\$ Million	543.2	586.9	624.7	670.4	638.9	619.0	535.1	583.1	651.4	670.5	774.6	772.4	674.1	
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Imports for Consumption\*

\$ Million	532.0	545.1	623.6	623.9	564.8	566.1	512.6	576.6	704.0	657.6	689.0			
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Foreign Exchange Reserves\*

\$ Million U.S.	2,471	2,568	2,581	2,631	2,595	2,582	2,542	2,466	2,481	2,509	2,534	2,534	2,576	2,625
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# ONTARIO ECONOMIC REVIEW

PERIODICALS READING ROOM  
(Humanities and Social Sciences)

DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. S. J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*

NOVEMBER 1964  
VOL. 2  
NO. 7







# THE ONTARIO ECONOMY

The seasonally adjusted unemployment rate for Ontario increased slightly to a 4.0% level in October. However, increases in residential and non-residential construction awards, and new orders in manufacturing indicate prospects for a high level of production and employment. The Canadian consumer price index for October remained at the September level of 135.6 (1949 = 100). Canadian exports in September were 24% higher than in September, 1963. Foreign exchange reserves rose for the seventh consecutive month and totalled \$2.68 billion U.S. in October.

## PRODUCTION

The seasonally adjusted Canadian index of industrial production was 214.6 in August, up 1.8% from the July level (1949 = 100). Increases in both non-durable and durable manufactures were only partially offset by decreases in mining and electric power and gas utilities.

In the non-durable sector, the production of tobacco and tobacco products and rubber products showed the greatest one-month gain. The clothing and printing, publishing and allied industries showed decreases in production. Among the durable goods, wood products and transportation equipment displayed prominent increases whereas non-ferrous metal products declined. The total mining index declined fractionally from July, though several components displayed noticeable movement. Metal production increased by 3%, including gains in the mining of gold, copper and iron ore. Nickel production showed a decline for the third month in a row. Non-metals and fuel declined 7% and 2% respectively.

Motor vehicle production for October was 41,280 units including 34,414 cars and 6,866 trucks. This was a 29% decline from the October, 1963 level due to the General Motors strike in the United States and the related lay-off in Canada. November production this year may not exceed that of last year as a strike of the Ford Motor Company in the United States caused a lay-off of approximately 4,000 men from the thirteenth to the twenty-fourth of November at the Ford plant in Oakville.

Canadian steel production for October was 771 thousand tons, up 5% from September. Pig iron production declined 7% to an October level of 515 thousand tons. During the first ten months, the production of both steel and pig iron exceeded production for the entire year of 1962 and any previous year. It is quite probable that production of steel and pig iron

for the whole year will be approximately 8.9 and 6.6 tons respectively.

## CONSTRUCTION

Unadjusted data reveals that for the first ten months, dwelling unit starts in Ontario centres of 5,000 population and over numbered 44,376 which is an increase of 14% over the comparable period last year. Seasonally adjusted, the September number of dwelling unit completions was 19% higher than those of August. Dwelling unit starts declined 12% from August. In October, Ontario construction contracts were 18% above the previous month on a seasonally adjusted basis. Business, industrial and engineering contracts and housing contracts were valued at \$89.9 million and \$51.3 million respectively.

Large awards of one million dollars and over recorded during October were valued at \$53.6 million in Ontario. This represents 38% of the total construction contracts awarded in the province (seasonally unadjusted). The table below lists some of the more significant awards.

LARGE CONSTRUCTION AWARDS  
PLACED RECENTLY IN ONTARIO

<i>City</i>	<i>Value (\$ million)</i>	<i>Description</i>
Brantford	1.3	Town housing
Hamilton	4.0	Reservoir
Hamilton	2.5	Apartments
Hamilton	2.0	Office building
London	2.4	Arts college for Western University
North York	1.6	Apartments
Oakville	2.6	Highschool
Orillia	1.3	Highschool addition
Oshawa	9.0	GM Truck chassis plant
Ottawa	1.1	Plant and office building
Parkhill	1.2	Dam
Scarborough	3.0	Apartments
Scarborough	1.3	Warehouse for McGraw Hill, Publishers
Toronto	1.0	Addition to Bayview Highschool
Waterloo	3.3	University building
Windsor	1.0	Plant addition
Various Locations	3.3	Provincial roadwork

## EMPLOYMENT AND INCOME

The October labour force was 2.546 million in Ontario and 6.962 million in Canada. Actual unemployment rates were 2.9% and 3.7% for Ontario and the nation compared with 2.7% and 3.9% in October, 1963.

Seasonally adjusted, the Ontario labour force numbered 2.549 million — no change from September. The number employed declined from a September level of 2.464 million to 2.448 million, largely as a result of lay-offs in the automotive industry. The seasonally adjusted unemployment rate for October was 4.0%. At the National Employment Service offices in Ontario, the number of applicants registered for employment was 3% lower than in October, 1963.

The Ontario labour income seasonally adjusted was \$825 million during August. This was 1.5% and 7.0% above that of July, 1964 and August, 1963 respectively. The Canadian labour income for August was \$1,925 million, up 1.0% and 8.4% above that of July, 1964 and August, 1963 respectively. Average weekly wages and salaries in August for Ontario and Canada were \$90.48 and \$87.16 respectively.

## SALES

Retail sales in Ontario were up 10% in value over September last year. Over the nine month period they were 6% higher than a similar period in 1963. Sharing the highest increases in the January to September period were sales of lumber and building materials (14%), variety goods (14%), motor vehicles (11%), and department store goods (10%).

Sales of passenger cars in Ontario numbered 14,435 for August. This was over 30% higher than August, 1963 and brought the total for the first eight months to over 177 thousand units — up 15% from the comparable period in 1963. For the first eight months, sales of commercial vehicles were 22% higher than for the same period last year. However, August sales were down 8% from August, 1963.

The value of Canadian wholesale trade was \$840 million during August — up 6% from August, 1963. This increase is less than the 11% for the first eight months over the same period last year. In the January to August comparison, sales of electrical apparatus, farm machinery, industrial and transportation equipment and construction materials showed the greatest increases. The smallest wholesale increases appeared in the sales of automotive parts and accessories, tobacco, confectionery and soft drinks.

## PRICES

The Canadian consumer price index for October was 135.6, unchanged from the September level (1949 = 100). The food and transportation components declined as a result of lower prices of fresh fruit, vegetables, beef, fresh pork, eggs, sugar, coffee and gasoline. These declines were offset by increases

in the other five components — namely housing, health and personal care, recreation and reading, tobacco and alcohol, and clothing. Amongst these components, the items with more significant price increases included coal, doctors' and dentists' fees, sporting event admission fees, records, radios, newspapers, cigarettes and winter coats.

The October wholesale price index of 30 industrial materials was 260.7 based on 1935-39 = 100. The 0.7% increase from September was due to increases for domestic lead and zinc, tin, cottonseed oil, oats, raw rubber and white lead, which were partially offset by decreases for sisal, hogs, beef hides, raw cotton and steers.

## FINANCE

Throughout October, the total supply of money was approximately \$17.36 billion — down \$0.14 billion from September. The supply of short-term loanable funds on the Canadian money market was somewhat limited. The day-to-day loan rate was generally quoted at around a level of 3½% during the period.

Virtually all segments of the Canadian bond market exhibited strength by way of sizeable price gains. Prices of short-term Government of Canada bonds were higher by some 30 to 50 cents, while longer termed issues posted gains ranging up to as much as \$1.50 on a \$100.00 par value bond. A new \$60 million 20-year 5¼% Province of Ontario debentures issue came to the market, priced at \$98.75 to yield 5.35%. The issue was oversubscribed shortly after being made available to the public. New Canadian bond financing for the first ten months of 1964 totalled \$2.94 billion — an increase of 4.6% over the comparable total of \$2.81 billion in 1963.

Throughout most of October, prices of investment quality industrial equities listed on the Canadian stock exchanges held relatively firm. The only exception occurred at mid-month when the market, in common with exchanges throughout the world, registered an emotional response to the political uncertainties engendered by the dismissal of Soviet Premier Nikita Khrushchev. This news came at a time when the market's nervousness was already apparent pending the outcome of the general election in the United Kingdom. The market's reaction, however, was short-lived and prices soon recovered to their former levels. The Toronto Stock Exchange Industrial Index closed the month at a level of 165.50, up 0.30 points on Index over the beginning of October.

Canada's foreign exchange reserves (official holdings of gold and U.S. dollars) increased by \$62.1 million U.S. during October and thus closed the month at a level of \$2,686.6 million U.S. The month's gain of \$119.3 million U.S. was, in effect, reduced by Canada's final repayment of \$57.2 million U.S. to the International Monetary Fund on its 1962 \$300 million U.S. loan.



The value of the Canadian dollar in terms of U.S. funds remained at a fairly constant level throughout October, fluctuations being confined to a 0.11 cent range. It closed the month at a level of 93.05 cents, a net increase of 0.02 cents over the month.

#### FOREIGN TRADE

Canadian exports totalled \$725.4 million in September — an increase of 24% from September, 1963. For the January to September period the increase over last year was 23%. In this latter comparison, exports to various geographical regions rose as follows: United States 13%, United Kingdom 21%, European Common Market 25%, East Europe 686% (mostly due to sales of wheat to Russia), Middle East 8%, other Africa 9%, other Asia 16%, Oceania 30%, South American 6% and Central America 59%.

The increases were particularly noticeable in the exports of food, feed, beverages and tobacco (52%) and of inedible end products (44%). Exports of fabricated materials and crude materials increased by less than the average rate for total exports and exports of live animals actually declined.

The value of total imports for July was \$639.8 million — up 9% from July, 1963. A breakdown of import activity is only available for May, at which

time imports were \$657.7 million and \$3,017 million for the January to May period — up 17% from the \$2,577.8 million level for the same period of the previous year.

During these first five months, Canadian imports from the U.S., the U.K. and the European Common Market rose 17%, 21% and 20% respectively compared with the January to May period of 1963. The commodity groups experiencing the largest increases were inedible end products (22%) and inedible fabricated materials (17%). Imports of live animals showed a large increase (41%) but were of small dollar value. Imports of food, feed and beverages and inedible crude materials rose at less than the average rate for all goods.

*NOTE: In the October issue of this publication, there was a table on average weekly wages and salaries for selected Ontario cities. The table contained only nine cities because manufacturing statistics were not available for others. It should be noted that this omission included the cities with the highest and lowest earnings in the province during July, 1964. During that month, average weekly wages and salaries paid in Sarnia were \$109.80 and in Galt \$75.66.*

## A PILOT STUDY ON REGIONAL LABOUR INCOME IN ONTARIO

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This article summarizes the results of a pilot study on Regional Labour Income in Ontario, which was initiated earlier this year by the Special Research and Surveys Branch, and represents a slightly modified version of a technical paper presented to the Fifth Federal-Provincial Conference on Economic Statistics, Ottawa, November 16-18, 1964.

The first section of the article briefly outlines the estimation of regional subaggregates from taxation statistics and tests the validity of these estimates. It is interesting to report that the labour income data derived from taxation statistics agree, both on the provincial and national level, very closely with those compiled by the Dominion Bureau of Statistics on the basis of an entirely different approach.

The second part examines, in tentative form, the growth and trend pattern of regional labour income

in Ontario on an aggregate as well as on a per capita basis. The main emphasis rests on the determination of differential growth rates and their use in assessing current and anticipated trends of regional labour income.

The last section describes the structural relationship of regional subaggregates with total provincial labour income in the form of an econometric model and its application to forecasting and as an economic indicator at regional level.

Basic tables accompany the text while supplementary tabulations are presented in the Appendix. The author acknowledges with appreciation the contribution of Miss D. Gerkis, Economist with the Special Research and Surveys Branch, in assisting with the preliminary research and carrying out the extensive computational work for this project.

We also wish to thank staff members of the Dominion Bureau of Statistics for their assistance and encouragement in undertaking this study. However, the techniques and views presented are the responsibility of the Special Research and Surveys Branch.

Preliminary work is now in progress relative to the preparation of regional estimates on disposable labour income while similar pilot studies on other income components on a regional level are under active consideration.

#### ESTIMATION OF REGIONAL LABOUR INCOME IN ONTARIO

While estimates of labour income on the national and provincial level are compiled by the Dominion Bureau of Statistics on a monthly and annual basis, comparable statistical time series for sub-provincial economic regions are not available. In view of the increasing need for regional income data for inter-regional analysis and eventually, the development of regional accounts, based on concepts similar to those used in the National Accounts, a pilot study on regional decomposition of labour income in Ontario was initiated earlier this year by the Special Research and Surveys Branch.

After consultation with the Dominion Bureau of Statistics, it was decided to attempt to derive regional labour income estimates from taxation statistics. The Department of National Revenue publishes in *Taxation Statistics* annual data on the number of taxpayers and their total taxable and non-taxable income, broken down by major sources of income on a county or census division basis. These statistics are compiled from a sample of income tax returns filed by individuals during the taxation year. While prior to 1957 a straight 10 per cent sample was used, a more complex stratified sample was subsequently introduced with the result that the precision of the estimates has since been greatly improved.

In order to achieve maximum comparability with provincial estimates prepared by the Dominion Bureau of Statistics, an identical definition of labour income was adopted subject to the exclusion of supplementary labour income which, of course, can not be estimated from taxation statistics. While the availability of regional data on supplementary labour income, which comprises payments made by employers on behalf of their employees in order to provide them with future benefits, would be desirable, this component can be dispensed with in many practical analytical applications as it does not affect directly actual effective income and purchasing power of labour income recipients.

On the basis of this conceptual background, regional labour income for all of the ten economic regions of Ontario was computed as the summation

of the following components incorporated in the estimation formula:

$$L_n = \Sigma(WS + C)_T + \Sigma(WS + C)_{NT}$$

where the notation is as follows:

$L_n$  = the regional labour income with  $n = 1, 2 \dots 10$  designating individual regions

WS = Wages, salaries and related income

C = Commissions,

with the subscripts T and NT designating the taxable and non-taxable portions of the respective components while the summation extends over the number of counties aggregated in each of the  $n$  regions. The estimates derived from this procedure are presented in Table 1 at the end of this section.

Although total labour income figures for the Province of Ontario as prepared by the Dominion Bureau of Statistics include without explicit specification supplementary labour income, the Bureau provided us with unpublished estimates of the supplementary labour income portion for recent years which thus enabled us to test our series against the D.B.S. estimates over a limited range of the observational period under review.

	<i>Estimates of Ontario's Labour Income*</i>		<i>Difference %</i>
	<i>D.B.S. \$ millions</i>	<i>Pilot Study \$ millions</i>	
1960	7,270	7,408	+1.90
1961	7,531	7,752	+2.93
1962	8,053	8,145	+1.14

\*Excluding supplementary labour income.

To test our statistical approach on a broader scale, a comparable set of national labour income figures for the period 1952 to 1962 was prepared from taxation statistics and then compared with the Bureau's national estimates for which separate figures on supplementary labour income have been officially published for the entire range of observations under discussion.

Although for the period from 1952 to 1958 the discrepancy between taxation estimates and those prepared by D.B.S. average  $\pm 6$  per cent, the difference in estimated values has been very small fluctuating between 2.06 per cent and 0.16 per cent in recent years.

	<i>Estimates of National Labour Income*</i>		<i>Difference %</i>
	<i>D.B.S. \$ millions</i>	<i>Pilot Study \$ millions</i>	
1959	16,716	16,371	-2.06
1960	17,451	17,335	-0.67
1961	18,169	18,141	-0.16
1962	19,346	19,228	-0.61

\*Excluding supplementary labour income.



The apparent minor discrepancies in estimated aggregates on both the national and provincial level reflect largely differences in the generation and statistical coverage of the underlying primary data.

Whereas D.B.S. estimates are based essentially on annual survey tabulations of aggregate payrolls and published accounting statements thus representing labour income exclusively from the employer's point of view, data derived from taxation statistics reflect basically actual income received and reported by the labour force. The fact that income tax returns filed by employees must be corroborated by T4 slips issued by the employer and, in addition, are closely scrutinized by the taxation authorities, tends to make taxation statistics appear a more reliable source for income estimation.

While the relative merits of the two sources may be debatable, the surprisingly small magnitude of discrepancies between the two independently derived series reflects exceedingly well on the statistical quality of income data produced and developed by the Dominion Bureau of Statistics during the past two decades.

#### THE GROWTH AND TREND PATTERN OF REGIONAL LABOUR INCOME IN ONTARIO

The statistical decomposition of labour income by economic regions represents a first step toward the development of national-account type data facilitating a comparative economic analysis on an inter-regional basis in quantitative form. While thus far our regional studies were limited to a descriptive analysis of the economic structure and major facets of the individual regions, the availability of regional labour income series permits, for the first time, the determination of differential growth rates for Ontario's ten economic regions which will greatly enhance the evaluation of economic problems on the regional and local level.

With labour income accounting for some 66 per cent of total net national income and probably exceeding that figure at regional level, differential growth rates derived from regional labour income aggregates can safely be regarded as reflective of regional growth.

Reviewing the period 1951 to 1962, growth of aggregate regional labour income has been relatively uniform with only three Regions recording an annual compound rate smaller than that for the Province as a whole. Whereas Ontario's total labour income increased at an annual rate of 7¼ per cent during the period under review, wages, salaries and commissions earned in the Lake St. Clair Region experienced only a moderate growth of 5 per cent per annum, while labour income in the Niagara and Northwestern Ontario Regions showed an annual compound increment of 5¾ per cent and 6¼ per cent, respectively.

Above average growth was in evidence in the Eastern Ontario, Georgian Bay, Metropolitan Toronto, Lake Ontario, Mid-Western and Lake Erie Regions with annual compound growth rates ranging from 7½ per cent to 8½ per cent.

#### COMPOUND GROWTH RATES OF REGIONAL LABOUR INCOME 1951 TO 1962

	Above Average	Average	Below Average
Province of Ontario		7¼%	
Northeastern Ontario		7¼%	
Lake St. Clair			5%
Niagara			5¾%
Northwestern Ontario			6¼%
Eastern Ontario	8½%		
Georgian Bay	8¼%		
Metropolitan	7¾%		
Lake Ontario	7¾%		
Mid-Western Ontario	7½%		
Lake Erie	7½%		

The regional differences in growth are reflected in the changing percentage distribution of total labour income among the ten economic regions during the period. The Metropolitan Region accounts for over 40 per cent with its relative share rising from 41 per cent to 43 per cent between 1951 and 1962. The Niagara Region ranks second but its relative share decreased appreciably from 15.4 per cent to 13.3 per cent largely due to its peripheral position in relation to major industrial markets. Whereas the relative share of Eastern Ontario in total labour income increased from 9.5 per cent to 10.9 per cent, that of the Lake St. Clair Region declined from 7.7 per cent to 6.1 per cent.

The transfer of a substantial portion of existing automotive operations within the latter Region to central Ontario appears to have been the major cause for the decline which was only partially offset by new industries such as oil refining and chemical processing.

The substantial improvement in the position of Eastern Ontario reflects largely the rapid development of the chemical and associated industries along the St. Lawrence river during the 1950's. Labour income originating in Northeastern Ontario has grown at the same rate as that of the Province with the result that its relative share has remained unchanged at 7.1 per cent.

Both the Mid-Western Ontario and Lake Erie Regions show only moderate improvement in their relative position each accounting for about 5 per cent of Ontario's total labour income in 1962. The



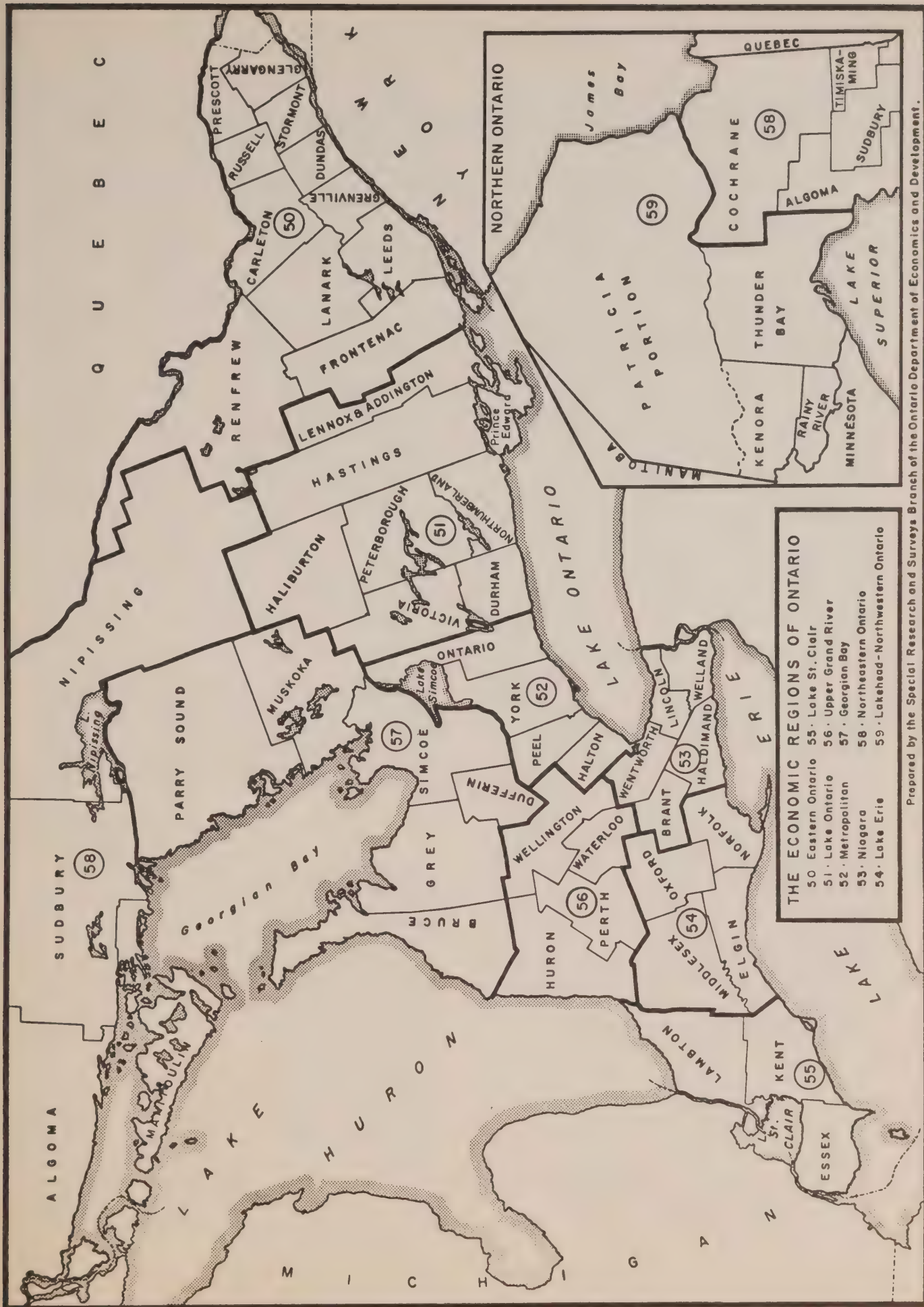
REGIONAL LABOUR INCOME OF ONTARIO  
millions of dollars

TABLE 1.

	Metro- politan	Niagara	Eastern Ontario	Northeastern Ontario	Lake St. Clair	Lake Erie	Mid-Western Ontario	Lake Ontario	Lakehead - Northwestern Ontario	Georgian Bay	Province
1951	1,550.5	582.7	359.9	265.6	291.4	188.5	184.2	129.8	129.2	94.3	3,776.1
1952	1,746.2	655.0	400.8	303.0	332.4	215.1	210.2	147.4	148.4	107.5	4,266.0
1953	1,967.4	704.8	455.4	314.4	357.8	238.5	233.1	162.6	151.8	119.3	4,705.1
1954	2,020.5	696.4	483.0	325.7	359.4	247.1	241.5	179.7	157.2	123.6	4,834.1
1955	2,145.8	728.1	513.2	358.1	381.9	262.6	256.6	191.0	167.1	131.3	5,135.7
1956	2,412.0	832.0	563.6	416.0	429.4	295.2	288.5	201.3	187.9	161.0	5,786.9
1957	2,583.7	881.4	656.3	510.8	416.8	303.0	305.8	232.1	230.9	166.4	6,287.2
1958	2,791.0	872.2	694.2	507.3	417.0	334.2	320.4	246.3	232.7	187.7	6,603.0
1959	2,933.1	944.0	728.6	544.0	445.8	362.4	343.3	258.9	236.7	194.2	6,991.0
1960	3,128.8	973.4	793.0	565.4	471.9	390.0	366.5	269.6	250.8	198.8	7,408.2
1961	3,353.2	1,005.3	848.4	564.4	461.8	398.7	382.2	276.3	249.9	211.5	7,751.7
1962	3,498.0	1,080.3	886.8	580.6	495.0	423.1	408.6	295.8	251.4	225.6	8,145.2

REGIONAL LABOUR INCOME OF ONTARIO: PERCENTAGE DISTRIBUTION  
as a % of Provincial Total

	Metro- politan	Niagara	Eastern Ontario	Northeastern Ontario	Lake St. Clair	Lake Erie	Mid-Western Ontario	Lake Ontario	Lakehead - Northwestern Ontario	Georgian Bay
1951	41.1	15.4	9.5	7.0	7.7	5.0	4.9	3.5	3.4	2.5
1952	40.9	15.4	9.4	7.1	7.8	5.0	4.9	3.5	3.5	2.5
1953	41.8	15.0	9.7	6.7	7.6	5.1	4.9	3.5	3.2	2.5
1954	41.8	14.4	10.0	6.7	7.4	5.1	5.0	3.7	3.3	2.6
1955	41.8	14.2	10.0	7.0	7.4	5.1	5.0	3.7	3.2	2.6
1956	41.7	14.4	9.7	7.2	7.4	5.1	5.0	3.5	3.2	2.8
1957	41.1	14.0	10.4	8.1	6.6	4.8	4.9	3.7	3.7	2.7
1958	42.3	13.2	10.5	7.7	6.3	5.1	4.9	3.7	3.5	2.8
1959	41.9	13.5	10.4	7.8	6.4	5.2	4.9	3.7	3.4	2.8
1960	42.2	13.1	10.7	7.6	6.4	5.3	5.0	3.6	3.4	2.7
1961	43.3	13.0	10.9	7.3	6.0	5.1	4.9	3.6	3.2	2.7
1962	42.9	13.3	10.9	7.1	6.1	5.2	5.0	3.6	3.1	2.8



**THE ECONOMIC REGIONS OF ONTARIO**

50 Eastern Ontario 55 Lake St. Clair  
 51 Lake Ontario 56 Upper Grand River  
 52 Metropolitan 57 Georgian Bay  
 53 Niagara 58 Northeastern Ontario  
 54 Lake Erie 59 Lakehead-Northwestern Ontario

TABLE 3.

AVERAGE LABOUR INCOME PER CAPITA OF LABOUR INCOME RECIPIENTS  
dollars

	1957	1958	1959	1960	1961	1962
Province of Ontario	2,915	3,096	3,197	3,309	3,428	3,529
Metropolitan	3,078	3,325	3,422	3,540	3,698	3,803
Niagara	3,071	3,130	3,306	3,402	3,504	3,681
Eastern Ontario	2,814	3,007	3,059	3,199	3,394	3,469
Northeastern Ontario	3,243	3,344	3,522	3,623	3,649	3,701
Lake St. Clair	2,822	2,934	3,064	3,204	3,208	3,354
Lake Erie	2,425	2,590	2,720	2,819	2,869	2,981
Mid-Western Ontario	2,479	2,662	2,728	2,835	2,910	2,987
Lake Ontario	2,528	2,707	2,746	2,849	2,953	3,056
Lakehead-Northwestern Ontario	3,093	3,311	3,345	3,468	3,529	3,554
Georgian Bay	2,150	2,361	2,364	2,390	2,516	2,557

relative share of the Lake Ontario Region increased rapidly from 3.5 per cent in 1951 to about 3.7 per cent in the mid-fifties under the impact of the development of secondary manufacturing but has since tended to stabilize at an average level of 3.6 per cent in recent years.

Reflecting the cyclical fluctuations in the natural resource-based industries and the slower growth of manufacturing activity, the relative share of the Northwestern Ontario Region in total provincial labour income declined from 3.4 per cent to 3.1 per cent during the period under review. Although accounting for only 2.8 per cent of labour income in Ontario, wages, salaries and commissions earned in the Georgian Bay Region have shown above average growth largely due to the rapid development of the tourist trade and associated service industries.

In evaluating the results of this analysis it should be realized, however, that aggregate regional income figures do not fully reflect the appreciable differences in area and size of the labour force between individual regions and therefore tend to distort, to some extent, the magnitude of actual effective growth. In order to put the historical overall growth pattern in proper perspective, we have supplemented our aggregate regional labour income series by a tabulation of labour income per capita (of labour income recipients).

As the number of relevant income tax returns by counties is available only since 1957, the time series for average regional labour income per capita is much shorter than that for aggregate labour income with the result that the growth rates derived from the time series are not strictly comparable.

Region	Annual Growth of Labour Income Per Capita 1957 - 1962
	%
Province of Ontario	3⅞
Metropolitan	4⅞
Eastern Ontario	4¼
Lake Erie	4¼
Lake Ontario	3⅞
Mid-Western Ontario	3¾
Niagara	3⅝
Georgian Bay	3½
Lake St. Clair	3½
Lakehead-Northwestern Ontario	2⅞
Northeastern Ontario	2¾

Whereas average income per employee in the Province increased at a rate of 3⅞ per cent per annum during the period, labour income per capita in the Metropolitan Region experienced an annual



growth of 4% per cent followed by the Eastern Ontario and Lake Erie Regions with a growth rate of 4¼ per cent per annum. Income per employee in the Lake Ontario, Mid-Western and Niagara Regions showed annual increments about equal to that for the Province as a whole while the remaining four regions recorded growth rates ranging from 3½ per cent to 2¾ per cent per annum.

In terms of the absolute magnitude of average wages and salaries earned, the Metropolitan, Niagara, Northeastern and Northwestern Ontario Regions have lead consistently with earnings exceeding \$3,000 per annum. While in the case of the Metropolitan Region this reflects the vigorous and continuous industrial expansion which has taken place, the high level of labour income per capita in Northeastern and Northwestern Ontario, despite slow growth in employment and industrial activity, is due largely to the above average wage rates paid in the mining and forest based industries characteristic of these two regions. Despite the relative decline in aggregate labour income, average earnings per capita in the Niagara Region exceeded the \$3,000 level throughout the period as wages in the steel and automotive industries rose sharply. In the Georgian Bay Region, however, despite the fact that aggregate labour income has experienced above average growth, the level of labour income on a per capita basis has remained consistently the lowest in the Province.

While the preceding analysis has concentrated on the purely descriptive aspects of relative growth and regional distribution of labour income, the availability of these data will, in the future, greatly facilitate econometric studies and the design of quantitative regional development plans.

#### USE OF LABOUR INCOME DATA AS REGIONAL ECONOMIC INDICATORS

As the trend and actual level of regional labour income represents a major economic indicator, it is of utmost importance that reasonably current preliminary estimates be available on a continuing basis. While D.B.S. estimates of provincial labour income are prepared on an annual as well as on a monthly basis, the taxation statistics used in this study are published by the Department of National Revenue only annually, with a considerable time lag.

However, as the two time series agree very closely, labour income data released by the Dominion Bureau can be used to prepare advance estimates of the regional subaggregates with a high degree of accuracy on the basis of the strong statistical correlation between total provincial labour income and its regional components.

Using the statistical time series presented in Table 1 of this study, econometric analysis shows that

labour income for each of the ten regions ( $Y_n$ ) can be expressed as a function of total provincial labour income ( $X_1$ ) exclusive of supplementary labour income and a trend variable ( $t$ ):

$$Y_n = f(X_1, t)$$

specified in the conventional linear form:

$$Y_n = a + bX_1 + ct + u,$$

where  $a$ ,  $b$  and  $c$  are the relevant equation parameters to be estimated statistically and  $u$  represents a random disturbance term.

A similar equation was set up for the purpose of estimating total provincial labour income excluding the supplementary income component from the provincial data published by the Dominion Bureau.

The thirty-two parameters of this equation system were then estimated by standard multiple regression analysis leading to a compact regional labour income model for the Province of Ontario. A detailed summary of the eleven equations, showing the overall correlation coefficients as well as the standard errors of the parameters and estimates is presented in Table 4.

The extremely close fit of the model to actual reality is illustrated by the high coefficients of determination, which, adjusted for degrees of freedom, range from 0.998 to 0.934 averaging 0.982 for the system as a whole, while the standard errors of the parameters are very small by accepted statistical standards.

As a result of these highly favourable structural properties of the system, the standard errors of the estimates derived from the equations in relation to the mean value of the dependent variable range from an extreme low of 0.96 per cent to a maximum of 5.27 per cent with an average error of 2.60 per cent for the model as a whole.

To illustrate the predictive power and high degree of accuracy of the model, the formulae were tested for a number of years for which actual taxation data were available for comparative purposes. The record for the years 1959 and 1961 is reproduced in full but similar favourable results could be obtained from any other random selection of years.

1959	Actual*	Computed	% Difference Actual/Computed
	\$ billions	\$ billions	
Province	6.99	7.03	-0.6
Y <sub>1</sub>	2.93	2.97	-1.4
	\$ millions	\$ millions	
Y <sub>2</sub>	944.0	946.5	-0.3
Y <sub>3</sub>	728.6	743.7	-2.2
Y <sub>4</sub>	544.0	528.4	+3.0
Y <sub>5</sub>	445.8	448.7	-0.7
Y <sub>6</sub>	362.4	359.9	+0.7
Y <sub>7</sub>	343.3	346.6	-1.0
Y <sub>8</sub>	258.9	254.5	+1.7
Y <sub>9</sub>	236.7	235.1	+0.7
Y <sub>10</sub>	194.2	192.4	+0.9

\*Based on published taxation statistics.

TABLE 4.

SUMMARY OF REGRESSION EQUATIONS				
$X_1 =$	$0.7882 +$ (0.0192)	$0.7024 X_0 +$ (0.0391)	$0.1346 t$ (0.0148)	$\overline{R^2} = 0.9984, \overline{S} = 0.0576, \overline{S}/\overline{X}_1 = 0.0096$
$Y_1 =$	$0.2453 +$ (0.0111)	$0.3415 X_1 +$ (0.0276)	$0.0409 t$ (0.0110)	$\overline{R^2} = 0.9973, \overline{S} = 0.0332, \overline{S}/\overline{Y}_1 = 0.0132$
$Y_2 =$	$-59.1963 +$ (5.1423)	$172.7455 X_1 -$ (12.8183)	$26.0837 t$ (5.1221)	$\overline{R^2} = 0.9902, \overline{S} = 15.4269, \overline{S}/\overline{Y}_2 = 0.0186$
$Y_3 =$	$-22.2889 +$ (4.2327)	$97.0800 X_1 +$ (10.5508)	$10.4440 t$ (4.2160)	$\overline{R^2} = 0.9949, \overline{S} = 12.6981, \overline{S}/\overline{Y}_3 = 0.0206$
$Y_4 =$	$-388.5098 +$ (7.6910)	$171.6035 X_1 -$ (19.1714)	$36.1859 t$ (7.6607)	$\overline{R^2} = 0.9626, \overline{S} = 23.0735, \overline{S}/\overline{Y}_4 = 0.0527$
$Y_5 =$	$157.6744 +$ (19.2159)	$41.3960 X_1 -$ (3.1332)		$\overline{R^2} = 0.9338, \overline{S} = 14.9704, \overline{S}/\overline{Y}_5 = 0.0370$
$Y_6 =$	$70.5994 +$ (2.2703)	$30.9458 X_1 +$ (5.6593)	$8.9710 t$ (2.2614)	$\overline{R^2} = 0.9922, \overline{S} = 6.8113, \overline{S}/\overline{Y}_6 = 0.0223$
$Y_7 =$	$58.7168 +$ (1.0937)	$33.6567 X_1 +$ (2.7262)	$6.4057 t$ (1.0894)	$\overline{R^2} = 0.9979, \overline{S} = 3.2812, \overline{S}/\overline{Y}_7 = 0.0111$
$Y_8 =$	$81.2025 +$ (1.8360)	$13.6018 X_1 +$ (4.5767)	$9.7119 t$ (1.8288)	$\overline{R^2} = 0.9899, \overline{S} = 5.5081, \overline{S}/\overline{Y}_8 = 0.0255$
$Y_9 =$	$-147.3971 +$ (3.4810)	$73.4381 X_1 -$ (8.6771)	$16.7194 t$ (3.4673)	$\overline{R^2} = 0.9503, \overline{S} = 10.4435, \overline{S}/\overline{Y}_9 = 0.0524$
$Y_{10} =$	$-38.2973 +$ (1.5320)	$34.8232 X_1 -$ (3.8188)	$1.7637 t$ (0.5260)	$\overline{R^2} = 0.9891, \overline{S} = 4.5961, \overline{S}/\overline{Y}_{10} = 0.0287$

NOTATION:  $X_0$  = provincial labour income including supplementary income in billions of dollars, as reported by D.B.S.

$X_1$  = provincial labour income in billions of dollars, excluding supplementary income component.

$t$  = time trend,  $t = 0, 1, 2, 3 \dots$  with  $t = 0$  in 1951.

$Y_n$  = regional income in millions of dollars, except for  $Y_1$  which is expressed in billions.

$n = 1, 2 \dots 10.$

1 = Metropolitan

4 = Northeastern Ontario

7 = Mid-Western Ontario

2 = Niagara

5 = Lake St. Clair

8 = Lake Ontario

3 = Eastern Ontario

6 = Lake Erie

9 = Lakehead-Northwestern Ontario

10 = Georgian Bay

NOTE: In the equation for  $Y_5$  the trend variable was eliminated as the respective coefficient proved to be statistically not significant.

1961	Actual*	Computed	% Difference Actual/Computed
	\$ billions	\$ billions	
Province	7.75	7.67	+1.0
Y <sub>1</sub>	3.35	3.27	+2.4
	\$ millions	\$ millions	
Y <sub>2</sub>	1005.3	1004.9	+0.04
Y <sub>3</sub>	848.4	826.8	+2.6
Y <sub>4</sub>	564.4	565.8	-0.3
Y <sub>5</sub>	461.8	475.2	-2.8
Y <sub>6</sub>	398.7	397.7	+0.3
Y <sub>7</sub>	382.2	380.9	+0.3
Y <sub>8</sub>	276.3	282.6	-2.2
Y <sub>9</sub>	249.9	248.7	+0.5
Y <sub>10</sub>	211.5	211.2	+0.1

\*Based on taxation statistics.

Advance estimates for 1963 derived from our model are tabulated in the following summary. While the taxation data required for the computation of the regional labour income components will not be released by the Department of National Revenue until sometime early next year, we are fortunate in having confidential data on the provincial level which show that the difference between our estimate and that of D.B.S. is as small as 1.2 per cent.

1963	Estimates	Actual	% Difference Estimate/Actual
	\$ billions	\$ billions	
Province	8.73	8.63*	+1.2
Y <sub>1</sub>	3.72	n.a.	n.a.
	\$ millions	\$ millions	
Y <sub>2</sub>	1135.9	n.a.	n.a.
Y <sub>3</sub>	950.6	"	"
Y <sub>4</sub>	675.4	"	"
Y <sub>5</sub>	519.1	"	"
Y <sub>6</sub>	448.4	"	"
Y <sub>7</sub>	429.4	"	"
Y <sub>8</sub>	316.5	"	"
Y <sub>9</sub>	293.1	"	"
Y <sub>10</sub>	244.6	"	"

\*Actual figure of provincial labour income minus supplementary income component.  
n.a. — not available.

The regional labour income model developed in this pilot study also permits monthly estimation of

cumulative regional labour income for the preceding 12 months period on the basis of provincial labour income statistics released by D.B.S. and thus provides a continuous current quantitative measure of relative economic prosperity within Ontario's ten economic regions.

#### ESTIMATE OF CUMULATIVE TWELVE MONTHS REGIONAL LABOUR INCOME

July 1963 — June 1964	
	\$ billions
Province .....	9.06
Y <sub>1</sub> .....	3.85
	\$ millions
Y <sub>2</sub> .....	1179.8
Y <sub>3</sub> .....	987.8
Y <sub>4</sub> .....	713.9
Y <sub>5</sub> .....	532.7
Y <sub>6</sub> .....	463.1
Y <sub>7</sub> .....	443.7
Y <sub>8</sub> .....	325.8
Y <sub>9</sub> .....	309.0
Y <sub>10</sub> .....	255.2

Similarly the seasonal adjusted series of total provincial labour income can be used to estimate current regional labour income at annual rates by quarters comparable to those published in the quarterly National Account reports which are invaluable for the interpretation of regional trends and the formulation of policy guide lines.

## APPENDIX

This tabulation serves the purpose of illustrating the close fit of the structural equations (Y<sub>1</sub>, Y<sub>2</sub> . . . Y<sub>10</sub>) to the historical data from which they were derived. The values for X<sub>1</sub> used in the computations of the Y's are actual data from taxation statistics. For predictive estimates, X<sub>1</sub> must be estimated from X<sub>0</sub> as indicated in the summary of regression equations (Table 4). The predictive power of the relevant equation relating X<sub>1</sub> to X<sub>0</sub> is apparent from the tabulations shown in the last three columns of the Appendix.



# COMPARISON OF ACTUAL AND COMPUTED VALUES DERIVED FROM THE MODEL

## METROPOLITAN

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ billions</i>	<i>\$ billions</i>	
1951	1.55	1.54	+0.6
1952	1.75	1.74	+0.6
1953	1.97	1.94	+1.5
1954	2.02	2.02	nil
1955	2.15	2.16	-0.5
1956	2.41	2.43	-0.8
1957	2.58	2.64	-2.3
1958	2.79	2.79	nil
1959	2.93	2.96	-1.0
1960	3.13	3.14	-0.3
1961	3.35	3.30	+1.5
1962	3.50	3.48	+0.6

## NORTHEASTERN ONTARIO

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ millions</i>	<i>\$ millions</i>	
1951	265.6	260.2	+2.1
1952	303.0	308.1	-1.7
1953	314.4	347.4	-9.5
1954	325.7	331.8	-1.8
1955	358.1	348.8	+2.7
1956	416.0	424.1	-1.9
1957	510.8	473.8	+7.8
1958	507.3	490.8	+3.4
1959	544.0	521.5	+4.3
1960	565.4	557.4	+1.4
1961	564.4	579.6	-2.6
1962	580.6	611.9	-5.1

## NIAGARA

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ millions</i>	<i>\$ millions</i>	
1951	582.7	593.8	-1.9
1952	655.0	652.3	+0.4
1953	704.8	702.3	+0.4
1954	696.4	696.9	-0.1
1955	728.1	724.4	+0.5
1956	832.0	810.6	+2.6
1957	881.4	870.9	+1.2
1958	872.2	898.3	-2.9
1959	944.0	939.6	+0.5
1960	973.4	986.1	-1.3
1961	1,005.3	1,018.7	-1.3
1962	1,080.3	1,061.8	+1.7

## LAKE ST. CLAIR

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ millions</i>	<i>\$ millions</i>	
1951	291.4	314.0	-7.2
1952	332.4	334.4	-0.6
1953	357.8	352.6	+1.5
1954	359.4	357.6	+0.5
1955	381.9	370.4	+3.1
1956	429.4	397.4	+8.1
1957	416.8	418.1	-0.3
1958	417.0	430.9	-3.2
1959	445.8	447.0	-0.3
1960	471.9	464.4	+1.6
1961	461.8	478.5	-3.5
1962	495.0	495.1	-0.02

## EASTERN ONTARIO

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ millions</i>	<i>\$ millions</i>	
1951	359.9	344.7	+4.4
1952	400.8	402.7	-0.5
1953	455.4	455.8	-0.1
1954	483.0	477.9	+1.1
1955	513.2	518.5	-1.0
1956	563.6	592.0	-4.8
1957	656.3	651.0	+0.8
1958	694.2	691.5	+0.4
1959	728.6	739.9	-1.5
1960	793.0	791.1	+0.2
1961	848.4	834.5	+1.7
1962	886.8	883.8	+0.3

## LAKE ERIE

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ millions</i>	<i>\$ millions</i>	
1951	188.5	187.6	+0.5
1952	215.1	211.7	+1.6
1953	238.5	234.3	+1.8
1954	247.1	247.0	+0.04
1955	262.6	265.5	-1.1
1956	295.2	294.6	+0.2
1957	303.0	319.1	-5.1
1958	334.2	337.6	-1.0
1959	362.4	358.7	+1.0
1960	390.0	380.6	+2.5
1961	398.7	400.1	-0.4
1962	423.1	421.5	+0.4

## MID-WESTERN ONTARIO

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ millions</i>	<i>\$ millions</i>	
1951	184.2	185.9	-0.9
1952	210.2	208.8	+0.7
1953	233.1	230.1	+1.3
1954	241.5	240.5	+0.4
1955	256.6	257.3	-0.3
1956	288.5	285.6	+1.0
1957	305.8	308.9	-1.0
1958	320.4	325.7	-1.6
1959	343.3	345.2	-0.6
1960	366.5	365.8	+0.2
1961	382.2	383.6	-0.4
1962	408.6	403.5	+1.3

## LAKEHEAD-NORTHWESTERN ONTARIO

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ millions</i>	<i>\$ millions</i>	
1951	129.2	130.2	-0.8
1952	148.4	149.5	-0.7
1953	151.8	165.1	-8.1
1954	157.2	157.2	nil
1955	167.1	163.2	+2.4
1956	187.9	194.2	-3.3
1957	230.9	214.2	+7.8
1958	232.7	220.3	+5.6
1959	236.7	232.2	+1.9
1960	250.8	246.3	+1.8
1961	249.9	254.6	-1.9
1962	251.4	267.2	-5.9

## LAKE ONTARIO

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ millions</i>	<i>\$ millions</i>	
1951	129.8	132.6	-2.1
1952	147.4	149.0	-1.1
1953	162.6	164.7	-1.3
1954	179.7	176.0	+2.1
1955	191.0	190.0	+0.5
1956	201.3	208.5	-3.5
1957	232.1	225.0	+3.2
1958	246.3	239.0	+3.1
1959	258.9	254.0	+1.9
1960	269.6	269.4	+0.1
1961	276.3	283.7	-2.6
1962	295.8	298.9	-1.0

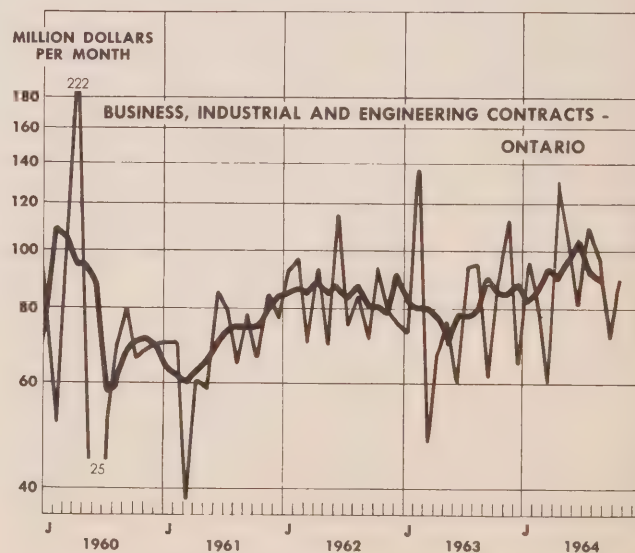
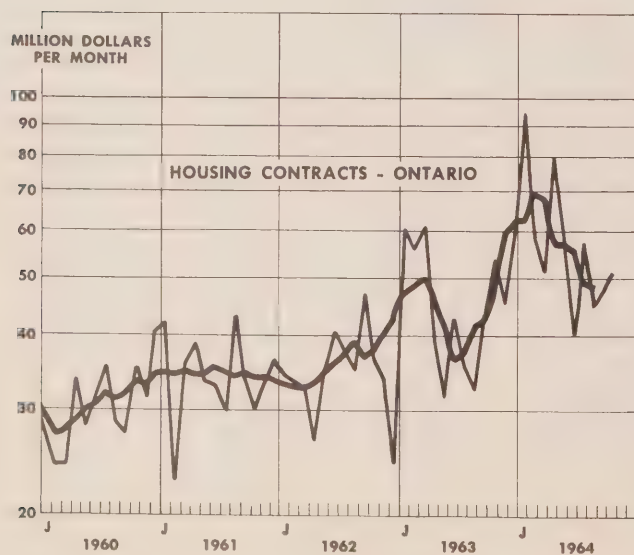
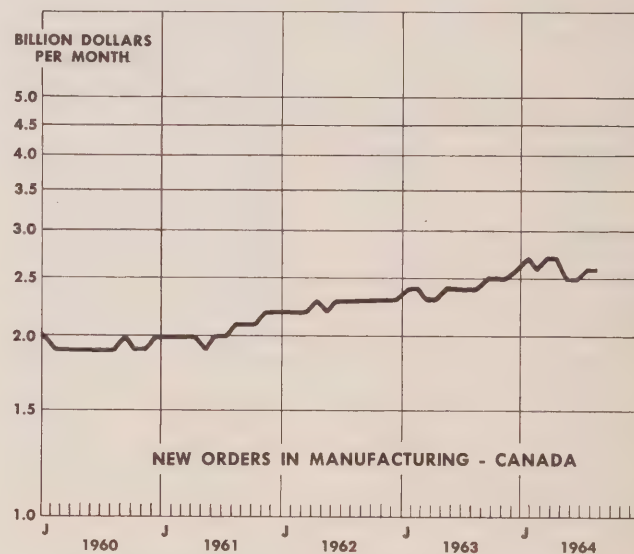
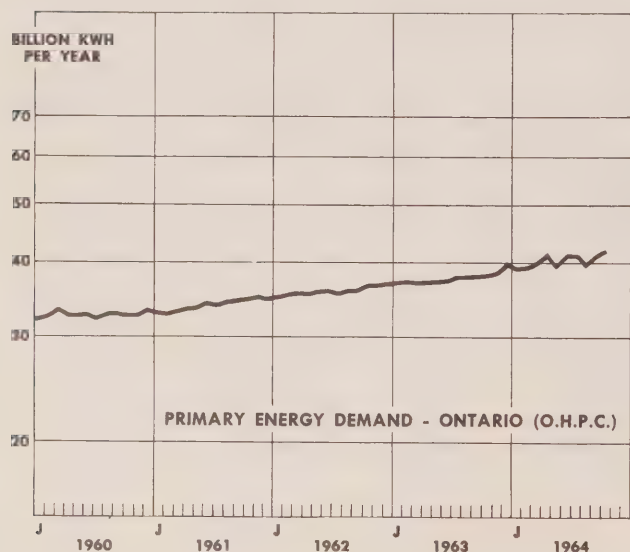
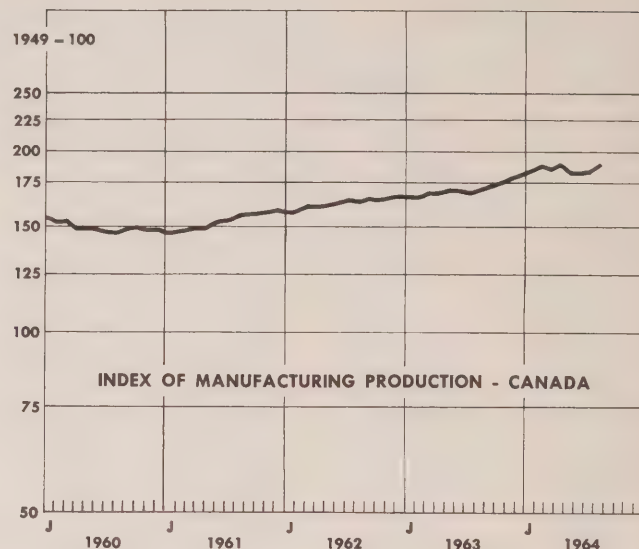
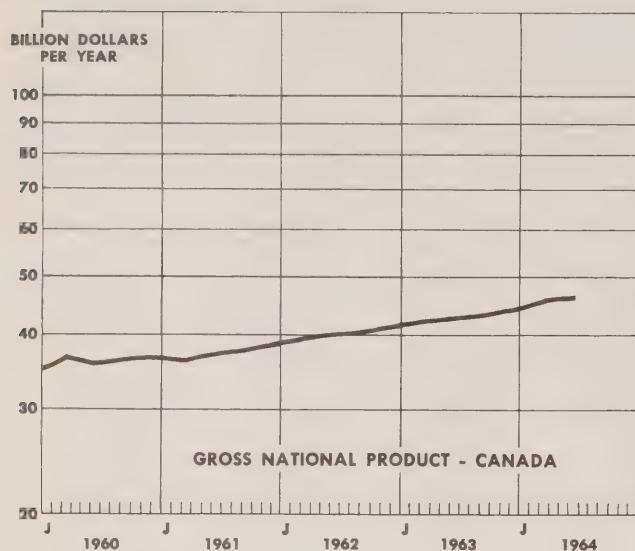
## GEORGIAN BAY

	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ millions</i>	<i>\$ millions</i>	
1951	94.3	93.3	+1.1
1952	107.5	108.6	-1.0
1953	119.3	122.2	-2.4
1954	123.6	124.6	-0.8
1955	131.3	133.5	-1.7
1956	161.0	154.5	+4.2
1957	166.4	170.2	-2.2
1958	187.7	179.2	+4.7
1959	194.2	191.0	+1.7
1960	198.8	203.7	-2.4
1961	211.5	213.9	-1.1
1962	225.6	226.1	-0.2

## PROVINCE

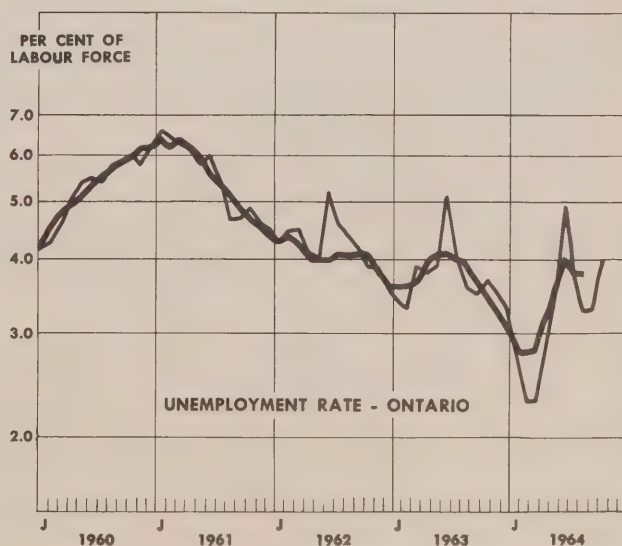
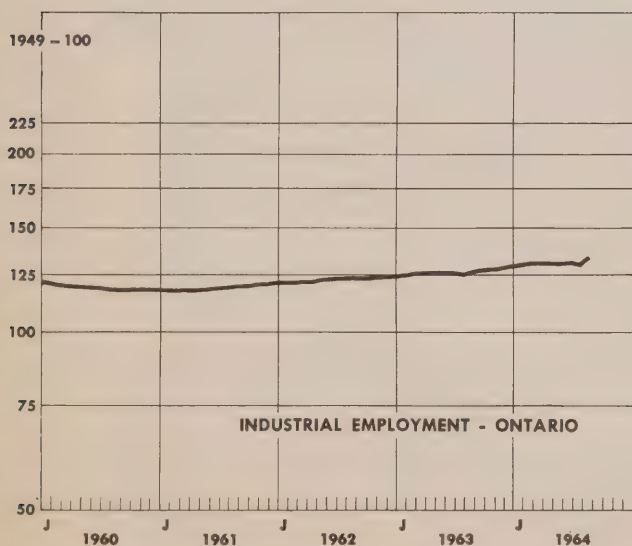
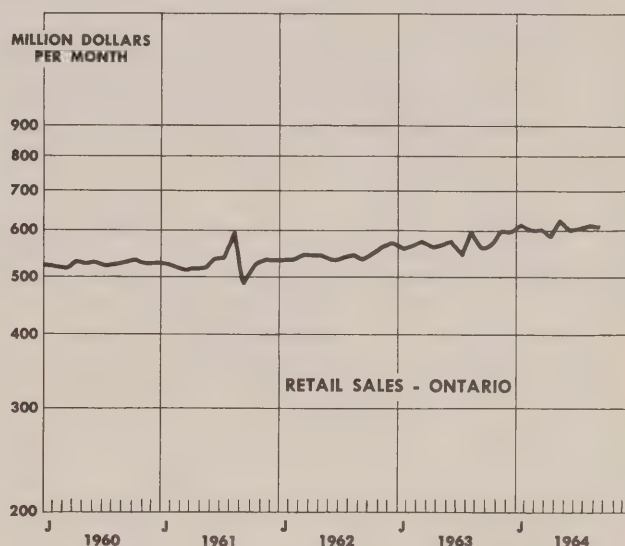
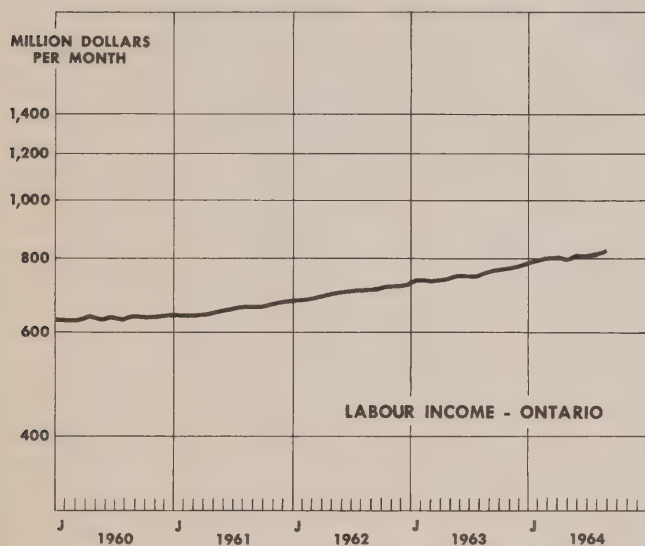
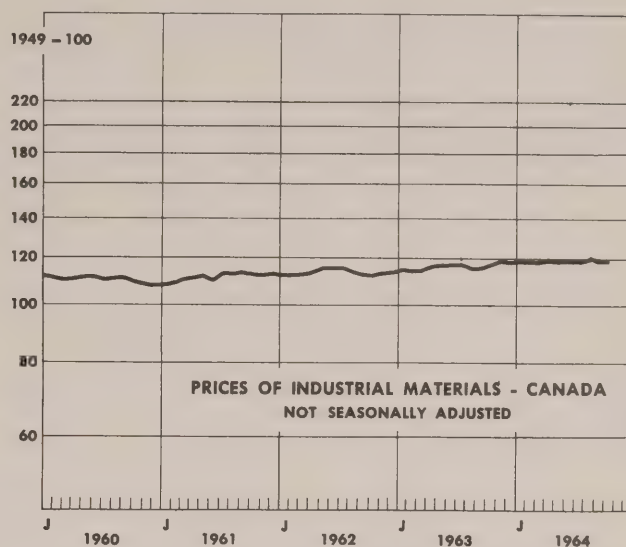
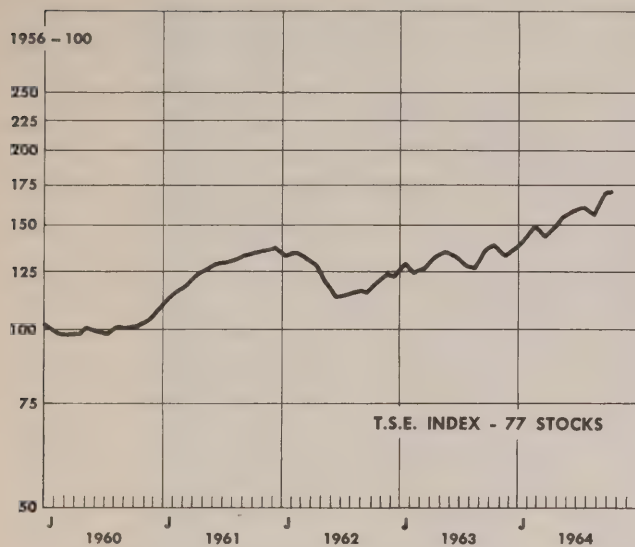
	<i>Actual</i>	<i>Computed</i>	<i>% Difference Actual/Computed</i>
	<i>\$ billions</i>	<i>\$ billions</i>	
1951	3.78	3.78	nil
1952	4.27	4.24	+0.7
1953	4.71	4.63	+1.7
1954	4.83	4.84	-0.2
1955	5.14	5.22	-1.5
1956	5.79	5.82	-0.5
1957	6.29	6.33	-0.6
1958	6.60	6.63	-0.5
1959	6.99	7.03	-0.6
1960	7.41	7.34	+1.0
1961	7.75	7.67	+1.0
1962	8.15	8.18	-0.4

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED





# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES

ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED

(\* Figures for Canada)

LEADING INDICATORS

	September	October	November	December	January	February	March	April	May	June	July	August	September	October
Average Weekly Hours Worked in														
Manufacturing	40.8	40.9	41.5	40.6	41.6	41.4	40.9	41.1	41.3	41.1	40.9			
Business Failures - Number	98	97	92	103	73	81	61	75	80	102	95	81	77	97
Business Failures - Liabilities	6,902	4,473	5,139	5,194	3,493	1,574	2,194	6,754	11,965	12,832	10,424	2,733	8,578	8,215
New Orders in Manufacturing*	2,511	2,518	2,501	2,676	2,676	2,560	2,699	2,686	2,507	2,549	2,555	2,591		
T.S.E. Index - 77 Stocks	135.9	138.0	133.1	136.1	140.5	138.7	143.3	148.6	155.3	158.9	160.5	156.6	169.6	171.0
New Dwelling Unit Starts	3,624	4,421	3,399	5,694	5,470	4,899	3,676	4,136	4,087	4,238	5,213	4,626	4,068	
Housing Contracts	43.6	53.8	45.4	60.8	94.5	58.8	51.5	80.0	56.9	40.1	57.6	44.9	47.7	51.3
Business, Industrial and Engineering														
Contracts	61.7	89.1	112.6	64.9	95.5	78.8	60.1	130.3	104.9	81.5	109.6	97.5	71.8	89.9
Money Supply*	16,165	16,434	16,522	16,612	16,797	16,758	16,863	17,003	17,095	17,211	17,364	17,430	17,499	17,357

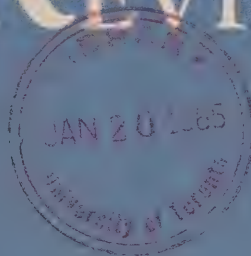
COINCIDENTAL AND LAGGING INDICATORS

Gross National Product*	\$ Million	43,076												
Total Industrial Production*	1949=100	198.1	200.2	203.5	207.7	210.8	212.3	210.2	214.7	211.3	210.9	214.6		
Total Manufacturing		175.4	177.4	180.2	183.5	185.2	188.6	186.3	190.4	185.6	186.3	191.1		
Non-Durables		173.7	175.2	175.9	180.1	179.7	184.2	180.1	185.5	180.9	181.3	184.7		
Durables		177.4	179.9	185.2	187.6	191.6	193.8	193.6	196.1	191.0	192.2	198.4		
Mining		300.8	303.0	305.1	311.8	335.2	324.9	321.3	321.0	321.1	315.9	314.7		
Electric Power & Gas Utilities		372.8	376.3	390.6	403.8	391.2	384.3	396.4	409.3	403.5	411.7	407.6		
Cheques Cashied in Clearing														
Centres	\$ Million	3,236	3,269	3,301	3,278	3,470	3,763	3,754	3,540	3,705	3,602	3,620		
Retail Trade	\$ Million	560	566	597	599	612	600	603	584	621	608	611	610	
Labour Income	\$ Million	761	767	771	781	790	795	800	798	803	809	825		
Labour Force	000's	2,474	2,489	2,490	2,512	2,490	2,492	2,521	2,513	2,530	2,582	2,574	2,549	2,549
Employed	000's	2,388	2,397	2,403	2,430	2,420	2,435	2,462	2,440	2,442	2,487	2,488	2,464	2,443
Unemployed	000's	86	92	87	82	70	57	59	73	88	95	86	85	101
Unemployed as % of Labour Force	%	3.5	3.7	3.5	3.3	2.8	2.3	2.3	2.9	3.5	3.7	3.3	3.3	4.0
1949=100		128.2	128.3	129.2	129.8	130.7	131.5	132.1	131.5	131.4	131.7	134.0		
Average Hourly Earnings in Manufacturing	\$	2.07	2.07	2.09	2.10	2.09	2.09	2.11	2.10	2.11	2.13			
Primary Energy Demand - OHPC	BKWH	37.84	37.92	38.34	39.85	38.84	38.97	39.88	41.25	40.98	41.01	39.79	41.08	41.81
New Dwelling Unit Completions	(No.)	3,302	3,256	3,108	3,343	4,650	5,322	5,403	5,494	5,570	3,923	3,798	4,519	
Prices, Industrial Materials*	1935-39=100	251.0	254.9	258.8	257.5	259.5	258.6	257.1	258.8	258.7	257.3	259.9	258.8	260.7
Domestic Exports*	\$ Million	586.9	624.7	670.4	658.9	619.0	535.1	583.1	651.4	774.6	772.4	674.1	725.4	
Imports for Consumption*	\$ Million	545.1	623.6	623.9	634.8	566.1	512.6	576.6	704.0	657.7	639.8			
Foreign Exchange Reserves*	\$ Million U.S.	2,563	2,581	2,631	2,595	2,582	2,542	2,466	2,481	2,509	2,534	2,576	2,625	2,687

ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED

PERIODICALS READING ROOM  
(Humanities and Social Sciences)

# ONTARIO ECONOMIC REVIEW



DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. S. J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*

CEMBER 1964  
VOL. 2  
NO. 8





# THE ONTARIO ECONOMY

Currently in the longest expansion since the war period, the economy continues to expand although showing narrowing margins over last year. Recently published national accounts indicate that the Canadian Gross National Product for the third quarter was \$46.7 billion seasonally adjusted — a gain of 1.4% over the second quarter. The high employment trend reflects generally buoyant conditions in the economy. In Ontario, the November unemployment rate was 2.9% seasonally adjusted.

## PRODUCTION

The Canadian index of industrial production for October, seasonally adjusted, was 213.6 based on 1949 = 100. A complete breakdown is as yet only available for September, at which time the production index was 213.5. During September mining declined by 1.2% from August followed by declines of 0.4% and 1.0% in non-durable and durable manufacturing. Electric power and gas utilities gained 2.9% from the previous month.

Total Canadian mining production declined for the third consecutive month on a seasonally adjusted basis. The latest monthly movement was due mostly to a 2.3% decline in metal production. Production levels of gold, copper, iron ore and nickel were lower than August levels, seasonally adjusted. Fuel production was lower due to decreases in the production of coal and petroleum. However, natural gas production displayed an increase over the August level. Though production of non-metals (mostly asbestos) declined 3.8% from August, this component accounts for less than 9% of total mining production.

Among non-durable manufactures, the production levels of most categories declined slightly from high August levels. Exceptions included increases in the rubber, printing and publishing and chemical and allied product industries. Though the majority of durables declined from August, non-ferrous metal production increased. Reflecting the current high levels of construction, the production of hydraulic cement increased 3.3% from August, seasonally adjusted.

For the first eleven months of 1964, motor vehicle production totalled 518,333 cars and 101,972 trucks

— a total increase of 10% over the comparable period last year. However, November production of cars and trucks was 16% lower than that of November, 1963, on account of a ten day lay-off at the Oakville plant of the Ford Motor Company and a decline of G.M. automobile production.

November steel ingot and pig iron production in Canada was 755 and 511 thousand tons respectively. For the first eleven months, steel ingot production was 8.2 million tons — a gain of 11% over the same period last year. In a similar comparison, pig iron production was 10% higher than the eleven month cumulative total of 1963.

## CONSTRUCTION

During the first eleven months of this year, dwelling unit starts in Ontario centres of 5,000 population and over numbered 52,365, an increase of 20% over the comparable period last year. Starts in November numbered 7,989 which is a gain of 74% from November, 1963. Both the cumulative and single month comparisons are slightly higher than the national averages of 18% and 65% respectively.

The cumulative total of dwelling unit starts in Ontario metropolitan areas during the first eleven months, with comparable figures for 1963 in brackets, are as follows: Hamilton 4,901 (3,352), Kitchener 2,936 (2,318), London 2,463 (1,936), Ottawa-Hull 5,407 (6,250), Sudbury 261 (447), Toronto 26,280 (21,469), Windsor 956 (656).

Seasonally adjusted, dwelling unit starts in Ontario numbered 5,303 in October, an increase of 14% from September, 1964. Completions seasonally adjusted numbered 4,160 — virtually no change from September.

On the seasonally adjusted basis, Ontario construction awards in November were 16% above the previous month. Housing contracts and business, industrial and engineering contracts were valued at \$71.7 million and \$93.6 million respectively.

The following table is a list of the larger construction projects awarded in November. They account for approximately 30% of the total November construction awards valued at \$174 million (seasonally adjusted).

LARGE CONSTRUCTION AWARDS  
PLACED RECENTLY IN ONTARIO

Location	Value (\$ million)	Description
Chinguacousy Twp.	1.0	Factory warehouse
Crowland Twp.	1.5	Factory addition
Hamilton	2.6	High schools
Kitchener	2.0	Apartments
London	2.7	Provincial hospital
Milton	4.5	Addition to school for the deaf
Sarnia	1.1	Addition to Northern Collegiate High School
Sault Ste. Marie	1.4	High school
Thistle town	1.6	Roadwork and services
Toronto	9.6	Four separate apartment buildings
Toronto	1.5	Addition to home for aged
Whitney Twp.	4.3	Provincial hospital
Windsor	3.0	Plant
Various Locations	6.3	Provincial roadwork

EMPLOYMENT AND INCOME

Seasonally adjusted, the Ontario labour force numbered 2.552 million in November. This was a slight increase from the previous month. The number of unemployed decreased from 101 thousand in October to 73 thousand. The November unemployment rate was correspondingly lower at 2.9% (4.0% in October). At the National Employment Service Offices in Ontario, the number of applicants registered for employment was 5% lower than the number in November, 1963.

The seasonally adjusted provincial labour income was \$838 million during September, 1.7% and 10.1% above that of August, 1964 and September, 1963

respectively. This gain may have contributed significantly to the increase in retail sales between September and October. Average weekly wages and salaries paid in Ontario and Canada during September were \$91.52 and \$88.04, a gain from September, 1963 of 4.8% and 4.5% respectively.

The construction, manufacturing, transportation, storage and communication, and finance, insurance and real estate industries showed gains of 5% and over reflecting the high level of activity in these fields in September.

NOTE: The figures above and in the following table do not represent weekly wage rates, but rather are reports of earnings including overtime benefits.

SALES

Retail sales in Ontario were valued at \$649.6 million for October, an increase of 11% from sales in October, 1963. The cumulative total for the first ten months of this year was \$5,968.9 million — up 6% from the January to October period in 1963. The highest percentage gains in the comparable comparison were in the sales of variety goods (+15%), department store goods (+12%), and lumber and building materials (+12%). Sales of shoes, drugs and miscellaneous goods showed below average increases and fuel sales showed a decline (—6%).

The September sales of passenger cars in Ontario numbered 16,285 units — an increase of 55% over September, 1963. Cumulative nine-month sales were 193,000 units — a gain of 17% over the corresponding period last year. Not only was there an increase in number, but also in value. The average price paid in Ontario in September, 1964 was \$3,090 compared with \$2,910 twelve months ago. This trend was displayed nationally as well. For 1964 and 1963, the Canadian average selling price per car in September was \$3,077 and \$2,903 respectively.

ONTARIO AVERAGE WEEKLY WAGES AND SALARIES BY INDUSTRY

	September, 1964 \$	September, 1963 \$	Change 1964/1963 %
Forestry.....	101.69	101.01	0.7
Mining.....	103.47	100.97	2.5
Manufacturing.....	96.55	91.49	5.5
Construction.....	105.66	100.63	5.0
Transportation, Storage and Communication	98.83	93.76	5.4
Public Utility Operation.....	113.17	108.94	3.9
Trade.....	74.95	72.70	3.1
Finance, Insurance and Real Estate.....	87.12	81.80	6.5
Service.....	65.40	62.87	4.0
Industrial Composite.....	91.52	87.36	4.8



Ontario sales of commercial vehicles were 19% above those of the nine-month period in 1963, although September sales were 11% lower than those of the previous September. Falling particularly were sales of commercial vehicles manufactured overseas. However, this is a small portion of the commercial vehicle market.

#### PRICES

The November consumer price index for Canada was 135.9 based on 1949 = 100. This was an increase of 1.4% from November, 1963, and 0.2% from October, 1964. Six of the seven components were higher in November than in the previous month. Both the food, and recreation and reading components increased 0.8% followed by increases of 0.4%, 0.2% and 0.2% for the components of health and personal care, clothing, and tobacco and alcohol respectively. The housing index increased 0.1% due to fractionally higher home-ownership prices. The transportation index remained unchanged from October.

The wholesale price index of 30 industrial materials was 260.4 for November, (1935-39 = 100). The index for the week ending November 27th was 260.1 — down 0.6% from the week ending October 30th. Increases in the prices of hogs, steers, beef hides and cottonseed oil were more than offset by decreases in the prices of sisal, raw sugar, tin, raw wool and raw rubber.

In the same four week comparison, the Canadian farm products price index increased from 213.7 to 217.5. In Eastern markets there were sharp price increases for tobacco and oats and lesser increases for barley, peas, and wheat. Prices for hay and potatoes increased in the West. Higher prices for animals (mainly for calves, hogs and steers) were felt in both markets.

#### FINANCE

An upward revision of the interest rate structure in the Canadian money market followed increases in the British, U.S. and Canadian Bank Rates announced on November 23rd and 24th. Reflecting this development, the day-to-day loan rate, which had remained fairly constant at around 3½% prior to the Bank Rate announcements, rose to close the month of November at a level of 4%.

The changes in international interest rate levels had an unsettling effect upon the Canadian bond markets. However, price recovery set in towards the end of the month and most maturities closed November at levels approximating those of a month ago. New Canadian bond financings during the first eleven months of 1964, at \$4.25 billion, were 19.8% higher than last year's comparable total of \$3.55 billion. Highlighting November's supply of new

issues was a \$475 million Government of Canada two-part refunding issue, comprising a new \$350 million, 5% issue with a six and a half year maturity priced at par, with the balance being a 3½% one-year bond issue — an addition to an already outstanding maturity, priced at \$99.20 to yield 4.33%.

By mid-November, prices of most major industrial groupings on the Canadian stock markets had reached record levels. However, profit-taking combined with some pronouncements that the current business boom may be faltering, and the increase in international interest rates served to dampen trading and thereby bring about a downtrend in equity prices. The Toronto Stock Exchange Industrial Index, after attaining an all-time closing high of 169.83 on November 17th, closed the month at a level of 165.78 — a gain nevertheless of 0.28 on Index over the month.

Canada's foreign exchange reserves (official holdings of gold and US dollars) increased by US \$56.8 million during November and thus closed the month at a level of US \$2,743.4 million.

Throughout November, fractional but steady gains were registered by the Canadian dollar in terms of US funds. After opening the month at a level of 93.05 cents, the value of the Canadian dollar subsequently advanced to close the month at a level of 93.19 cents, up 0.14 cents over the month.

#### FOREIGN TRADE

During the third quarter of 1964 there was virtually no deficit in the external account, seasonally adjusted. A merchandise trade surplus at an annual rate of \$1,148 million offset the non-merchandise deficit of \$1,156 million.

Seasonally adjusted merchandise exports rose to an annual rate of \$8,552 million, 1% above that of the second quarter. Merchandise imports declined 3% in the third quarter to an annual rate of \$7,404 million. The non-merchandise deficit incurred in the third quarter of 1964 was the second highest deficit on record. Seasonally adjusted, non-merchandise exports and imports were valued at annual rates of \$2,156 million and \$3,312 million respectively. Both these levels were 9% above those of the third quarter last year.

Unadjusted data for September indicate that exports were valued at \$725.4 million and imports at \$616.9 million, resulting in the fifth consecutive month with a merchandise surplus. Details of September exports appeared in the last issue of this publication. Import details are available up to July.

At a level of \$637.9 million, imports for the month of July were 9% higher than for July, 1963. The seven month cumulative total of \$4,342.4 million was 17% higher than for the comparable period last year. During these seven months, Canadian imports from the United States, the United Kingdom and the

European Common Market rose 18%, 19% and 20% respectively, over the first seven months of 1963. Imports from South America and Central America rose 14% and 20% respectively.

Rising imports of inedible end products reflected the buoyant economy in Canada. In the January to July period, imports of general and special purpose industrial machinery increased over 33% above that of the same period last year. Imports of motor ve-

hicles and office machines and equipment showed gains of 31% and 28% respectively. Among inedible fabricated materials, imports of iron and steel and alloys were up 36%. Imports of non-ferrous metals, textile yarns and threads, and broad woven fabrics displayed gains of around 20%. Imports of inedible crude materials rose only 7% including a 4% drop in imports of coal, crude petroleum and related crude products.

## THE GROWTH AND DEVELOPMENT OF PRIMARY IRON AND STEEL IN ONTARIO

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The primary iron and steel industry is both important and unique in the Ontario economy. In 1961 Ontario's 18 iron and steel mills shipped goods worth \$661.3 million, second only to the province's motor vehicle manufacturers. Iron and steel mills formed the largest single manufacturing group employing 26,572. In terms of "work done", or value added, they ranked first in the province with \$353.5 million. The industry is "primary" in the sense that its basic products are themselves the raw materials for a number of other secondary industries such as agricultural implements, motor vehicles and machinery. In terms of historical development, the industry is related to other secondary manufacturing industries primarily because it developed in response to the needs of the domestic rather than the foreign market.

The use of the word "primary" is apt to be misleading in an historical sense owing to the fact that the production of iron and steel has been, and still is, a relatively long and complex industrial process, requiring large amounts of capital equipment as well as a high degree of technological capability and managerial skill. The historical development of other purely primary industries has usually been characterized by a gradual increase in the complexity of the processing operations performed upon the raw material. The "work done", or value added, to the basic materials has always been high in iron and steel. While this has at times posed severe problems for the Ontario industry in terms of technology, finance and markets, the early emergence of the industry and its continuing industrial pre-eminence

represent a successful response to difficult conditions.<sup>(1)</sup>

The development of primary iron and steel has been intimately tied to the varying fortunes of domestic user industries. The success of Ontario iron and steel user industries in turn has depended partly on the quality and array of basic iron and steel forms available from domestic sources and partly on the growth of provincial and national markets. In the late 19th and early 20th centuries, these markets were associated with agricultural equipment, rails, railway rolling stock and machinery. More recently, the market growth for structural steel, motor vehicles, electrical apparatus and other producer and consumer durables has been important. Like most other Ontario secondary manufacturing industries, primary iron and steel has been supported with national tariffs as well as provincial and local bounties and incentives. Unlike some, it is an excellent example of an "infant industry" that grew to be a

<sup>(1)</sup> While the following applies to Canada the generalization also holds for Ontario: "Even in 1870 the iron and steel products industry group held first place . . . in magnitude of value added and continued throughout the period through 1957 to hold first place, except in 1880 and 1900 when primary wood products were first, and in 1933 when it ranked fourth. The early emergence of this industry to a position of prominence appears to indicate an economy experiencing industrial development, even though the heavy industrial complex of coal and iron inputs associated with the iron and steel production were largely missing." G. W. Bertram, "Economic Growth in Canadian Industry 1870 - 1915", *Canadian Journal of Economics and Political Science*, 29/2, p. 182.



successful adult — mature, experienced and competent — no longer requiring tariff protection.

The iron and steel industry of Ontario is unique in its non-utilization of domestic natural resources. The industry has relied for the most part on cheap American iron ore and bituminous coking coal. A lack of success in the 19th century in reducing the difficult Ontario and Canadian ores with contemporary technology resulted in location decisions placing the industry near adequate water facilities for receiving imported ore and coal while at the same time remaining as close as possible to major home markets. In contrast, other Ontario primary industries processing natural resources — pulp and paper, mining and smelting — located either near the material source or close to large electric power supplies and not to markets which are world-wide.

To integrate means to combine parts into a whole: Ontario's integrated producers of iron and steel combine four basic large-scale operations in one large complex in order to produce their final product. Integrated producers operate coke ovens to roast coal and transform it to coke; blast furnaces into which the coke is charged along with iron ore and limestone to produce pig iron; steel furnaces where the iron from the blast furnace along with steel scrap and other additives are combined and then cast to produce crude steel ingots; finally, they operate rolling mills where the steel ingots are reduced in size to blooms, billets and slabs. These basic steel forms — and that is all that blooms, billets and slabs really are — are then further processed to form the primary steel industry's end products — bars, rails, wire rods, structural shapes, plates, hot and cold rolled sheets, strip and coated materials such as galvanized sheet and tinplate.

Nearly all of Canada's virgin iron is produced by four large integrated producers. Most of the pig iron produced is destined for the maker's own steel furnace, although some quantities of virgin iron are sold to smaller steel-makers and industrial users. Three of Canada's four large integrated producers are located in Ontario. These three integrated producers alone accounted for 63% of Canada's iron and steel production in 1963. Ontario's total output is 84% of the 1963 Canadian total of 5.9 million tons of pig iron and 8.2 million tons of steel, and highlights the fact that the Ontario industry is virtually the Canadian industry.

Iron and steel in Ontario had its distant origins in the tiny blast furnace built in 1800 at Lyndhurst, near the outlet of Lake Ontario, and which operated for only two years. In addition to the Lyndhurst trial, attempts were made at various times to smelt iron at Marmora, Houghton, Madoc and Furnace Falls. Each proved unsuccessful, although a furnace built at Normandale in Western Ontario did operate from 1815 to 1847 when the local ores ran out.

Attempts to produce iron and steel in Ontario before the last quarter of the 19th century were largely unsuccessful for a number of understandable reasons. During the first half of the 19th century Ontario was basically a pioneer economy being opened up and settled through the exploitation of first the forest, then the farm. Ontario's staple industries were square timber, wheat and rough lumber. Ontario had neither the resources nor population to support an iron and steel industry. The limited market in the early 19th century for simple agricultural tools and settlers' utensils could be better supplied from England where industrialization was reflected in relatively cheap manufactured hardware and metal goods.

By 1850, the initial wave of pioneer settlement had passed. The population of Ontario may have approached 950,000. Agriculture, becoming more commercial, more broadly based and more capital intensive, was supplanting the earlier forest-based industries as the dominant Ontario industry. In addition to wheat, Ontario turned to the production of other cereals, livestock and dairy products. Mechanical agricultural implements — threshers, mowers, reapers — appeared in the United States in the late 1830's and early 1840's and a little later in Canada. The North-American railway age was also being ushered, or more correctly if less grammatically, "rushed" in. Wind, water and wood gave way to iron and steam.

For Ontario the growth between 1850 and 1870 was vital. In the words of one eminent Canadian historian:

"The years 1850 to 1870 coincide roughly with the first stage in the Canadian transition from the pioneer economy of the past to the diversified industrial production of the future."<sup>(2)</sup>

Increased demands for industrial machinery and steam power combined with railway extension, urban expansion, and easy access to American coal served to promote the beginning of heavy industry and make more possible the manufacture of both consumer and capital goods. "The foundries and machine working output and employment in agricultural implements are especially noteworthy."<sup>(3)</sup> Such centres as Toronto, Hamilton, Ottawa, Brantford and London figured prominently in the attraction of industry and manufacturing.

Ontario's iron and steel products industry basically relied on imported supplies of pig iron and crude steel prior to the last quarter of the 19th century. It was not until 1879 that the decision to encourage a national steel industry was undertaken.

<sup>(2)</sup> D. C. Creighton, *British North America at Confederation*, Ottawa, 1936, p. 16.

<sup>(3)</sup> R. E. Caves and R. H. Holton, *The Canadian Economy: Prospect and Retrospect*, Cambridge, 1961, p. 182.



In its narrow use, 'National Policy' refers to decisions taken that year in the formulation of a protective tariff to enhance the growth of Canadian industry. The tariff was one aspect of a tri-partite development policy aimed at promoting Western land settlement, building a transcontinental railway and establishing an industrial manufacturing sector.

Until 1879 iron and steel had entered Canada duty free or at very low rates. This was a reflection of the fact that Canadian and Ontario ores were difficult to reduce and also that the market for basic production was as yet insufficient given the capital and technological requirements of the industry prior to the 1860's. In 1871, Ontario produced nearly \$4 million of iron and steel products and better than \$4.5 million of foundry and machine shop products, but it was on the basis of imported rather than domestic material. Prior to the 1880's, the Canadian iron and steel industry *per se* was relatively insignificant.<sup>(4)</sup>

In 1879 the industry received important tariff protection. Duties on rolled and forged items now ranged up to 20% *ad valorem*. Imported crude steel (ingots) remained duty free until 1883 when a duty of \$5.00 a ton was imposed. The corollary to the above duty was the introduction in the same year of a bounty on pig iron produced from domestic ore. Ten years later the bounty was extended to Canadian produced steel and in 1897 the bounty was extended to pig iron produced from foreign ore.<sup>(5)</sup> The bounty system remained in effect until 1910.

Although the initial reason for the establishment of blast furnaces at Hamilton in 1895 and Sault Ste. Marie in 1901 may have been the advantage conferred by the bounty on Ontario ores,<sup>(6)</sup> reduction difficulties were soon encountered, especially in Hamilton, and as a result of a management change American ore was imported. Since the bounty was providentially extended to foreign ore in 1897, there was now an incentive to use the most tractable raw material. In any event, the successful invention of

both the Bessemer process in 1856 and the open-hearth process in 1864 had occurred in the not too distant past, and the burgeoning Ontario industry, though faced with high initial capital costs, reaped the benefits of modern techniques. The open-hearth process was adopted in Ontario because it was best suited to the bulk of North American low phosphorous ores.

Between 1879 and World War I, eight blast furnaces were established in Ontario. Five failed because they followed European practice and located close to local ore supplies rather than to secondary user markets or where convenient access to substitute material was available.

In 1895 a group of American businessmen established the Hamilton Blast Furnace Company and built a blast furnace to produce pig iron. In 1897 a steel plant was added and the company renamed the Hamilton Iron and Steel Company. Municipal, provincial and federal authorities combined to provide long-term tax relief, a free site, cash bonuses, bounties and tariff protection. The enterprise produced its first pig iron in 1896 and open-hearth steel in 1900. In 1910 the Steel Company of Canada was formed from five separate companies of which the core was the Hamilton Iron and Steel Company.

The discovery of iron ore in the Michipicoten area of Northern Ontario in 1897 led to the development of an exploitation company in 1899 and ore was sent to small blast furnaces at Midland. Railway expansion generally and a government order for rails in particular led to the establishment of the Algoma Steel Company in 1901. Production commenced in 1902 and after a re-organization in 1904 the Company secured a better financial base. In 1912 Algoma Steel Corporation emerged and expanded its capacity. The Algoma enterprise used local and imported ores and imported coal and limestone.

Dominion Foundries and Steel Company in Hamilton originated as a steel foundry in 1913, added a plate mill in the 1920's, and became an integrated producer in 1951 when it commenced producing its own pig iron.

Until the 1920's the success and rapid growth of the Ontario industry depended upon the wave of expansion associated with Western development, railway extension and the demands of the First World War. In 1915 Canada produced one million tons of crude steel; 655,000 tons of this went to rolled products of which 40.5% were in the form of plates, sheets and bars, 35.4% were rails, 18.9% rods and the remainder other primary products.<sup>(7)</sup>

The passing of the railway market and the fact that Ontario's steel using industries were insufficiently well developed to justify fully both pre-war and war-time additions to capacity spelled trouble

<sup>(4)</sup> "In 1880, thirteen Canadian iron-smelting and steel-making firms (three now in Ontario) produced an output of \$1.2 million." Bertram, *op. cit.*, p. 182.

<sup>(5)</sup> "By 1897 the principle of protecting the growing iron and steel industry substantially, but of allowing items not made in Canada, or steel for the use of certain manufacturers in their own plants to come in duty free had been established." Bank of Nova Scotia, *The Canadian Primary Iron and Steel Industry*, Ottawa, 1956, p. 6.

<sup>(6)</sup> It can also be strongly argued that the iron and steel complex of the Niagara Peninsula located in response to the pull of the user market in southern Ontario and cheap water rates on the Great Lakes and Welland Canal for the transport of American raw materials. While at Sault Ste. Marie the relevant locational factors hinged on the proximity of both U.S. ore and domestic reserves of hematite at Michipicoten and an expanding market for rails associated with the building of a second transcontinental Canadian railway early in the 20th century.

<sup>(7)</sup> W. K. Buck and R. B. Elver, *The Canadian Steel Industry*, Ottawa, 1963, p. 9.

in the post-war era and a period of retrenchment followed. Moreover, the types of steel most in demand during the 1920's were not produced in Canada in any great quantity. Thus, though many of Ontario's present steel users were little developed in the 1920's, those that were forging ahead — automobiles and construction — found that their requirements for sheet, strip and structurals could not be met from Canadian sources.

One of the implications of the structure of the Ontario iron and steel industry became apparent in the 1920's. This was the ability of those firms situated in the south of the province, Stelco and Dofasco, to take advantage of their geographic proximity to large southern markets. In addition, they had not been as dependent as Algoma in the north on previous railway expansion.

One of the interesting developments of the 1920's was the changing demand for steel on the part of users. In addition to the increased demand for sheet steel for motor vehicles and other durables, expansion in pulp and paper, chemicals, and electrical apparatus led to increased demands for various types of alloy steel possessing particular attributes — resistance to heat, cold, corrosion and chemicals. In 1928, this enlarged demand for alloy and specialty steel resulted in the establishment of Atlas Steels. Market proximity and low power rates played a prominent role in locating the firm in the Niagara Peninsula, but it was basic demand which brought success.

Over-expansion in the industry prior to the 1920's, rising imports and a changing demand on the part of steel users during the 1920's were unfortunately followed by the depression. The northern segment of the Ontario industry, already suffering in the 1920's, found the 1930's intolerable and underwent a period of extreme stress. Even Ontario's market-oriented southern segment suffered difficulties during the 1930's. As demand for equipment and durables fell off drastically, production in iron and steel fell similarly and at the depth of the depression, in 1932 and 1933, the industry operated at about 20% of capacity — the level of output approximating that of the early years of the century.

The demands of World War II led Ontario's manufacturing sector and primary iron and steel to greater diversification through more closely integrated processes and more complex machinery. War-time expansion in motor vehicles and armour, machinery, tool-making, electrical apparatus, armaments and construction, important as they were for the war effort, laid the base for post-war growth in iron and steel. As much as three-quarters of the war-time industrial structure was convertible to peacetime production. In 1935 Ontario produced some 660,000 tons of crude steel. In 1945 Ontario produced 2.1 million tons and in marked contrast to

previous experience the industry never looked back in the post-war period.

Product diversification came also as the result of the phenomenal post-war growth in secondary users of steel. The backlog of demand for producer and consumer durables was immediately followed by the natural resource boom of the late 1940's and early 1950's which brought further demands for capital goods.

Following the Korean War, construction activity and the penetration of a wide array of consumer durables helped to sustain the demand for iron and steel until the late 1950's.

Increased user demand naturally led to expanded production in lines which were previously uneconomic in Canada. Following large post-war capital investments, the Ontario industry is now capable of turning out a substantial volume of rolling mill products formerly imported. Among these are wide-width hot and cold rolled plate, strip and flat-rolled coated steel (both tin and galvanized). The trend to larger sized structural shapes and a greater variety of rods and bars has also been important.

Most of the \$1 billion spent on blast and steel furnace and rolling mill expansion since 1950 has been spent in Ontario. In the past ten years Algoma has spent over \$200 million expanding its ore facilities and since 1956 has been concentrating on its oxygen steel and rolling mill plants. Dofasco, since 1951 when it installed its first blast furnace, has also spent about \$200 million. Dofasco has expanded in all phases of operation from pig iron blast through rolling mill. Stelco in the past ten years has spent over \$370 million in full-line expansion.

In recent years the Ontario industry has successfully pioneered in applying technological improvements. Dofasco pioneered the first oxygen steel furnace in North America in 1954. (The oxygen process greatly reduces the blast time while lowering the scrap and raising the pig iron components of the charge). Algoma and Dofasco now operate five such furnaces. Stelco has now extended oxygen to the open-hearth process. Atlas Steels operates North America's only planetary hot rolling mill and scored another first on the continent with the introduction of continuous casting. Ontario producers have been successful in injecting auxiliary fuel (oil or natural gas) to the pig iron blast furnace. This combined with industry use of beneficiated ores has meant greater yields from given ore charges and smaller limestone and coke requirements. Research work is being carried on in Ontario to attempt to reduce iron ore directly and eliminate the large, costly and relatively inflexible blast furnace.

Automation has significantly affected the Ontario industry. With modern automated rolling mill methods, larger sizes and greater speeds result in ten times the volume of the World War II era and turn



out a better quality product. Automation has been successfully applied to other processes such as annealing, pickling, tinning and galvanizing.

The smaller iron and steel firms in the province have also participated in the general growth pattern. Atlas Steels has become the Commonwealth's largest producer of specialty and alloy steel with an annual capacity of around 200,000 tons. Prominent is its production of stainless steel. The company employs 2,500 people and operates six electric furnaces using scrap steel. The Burlington Steel Company at Hamilton produces about 80,000 tons annually of bars, angles and channels from scrap railway rails.

Steel accounts for 92%, by weight, of all metal usage primarily because of its relative cheapness and versatility. The post-war growth in rolled products has generally meant both higher profits and less volatile demand than in earlier years when the industry depended to a greater extent on rail orders. In 1963, 22% of the output of rolled steel went to the domestic construction industry and much of the 25% of output that went to wholesalers and merchant trades ultimately ends up in the construction industry. Over 12% of output went to pipe and tube producers primarily for oil and gas transmission lines and plumbing and heating. The motor vehicle industry took a further 8% or 414,000 tons. Ninety-seven per cent of Canadian factory shipments of motor vehicles originate in Ontario and the natural structural linkage between iron and steel and autos is both pronounced and important in the provincial economy. New processing developments in the food industry have contributed to a decline in steel output going to the container industry in recent years; however, the industry still takes some 7.7%.

Of the top ten industries in Ontario in 1961, iron and steel was second. But four more of the top ten were large users of Ontario's steel output. These were: motor vehicle manufacturers, motor vehicle parts and accessories manufacturers, miscellaneous machinery and equipment manufacturers, and metal

stamping, pressing and coating. These four industries along with iron and steel employed a total of 95,000 persons and shipped goods worth over \$2.3 billion. These figures represent one-sixth of the employment and one-fifth of the shipments of all Ontario manufacturing.

The growing strength and importance of Ontario's steel industry has been a natural one in recent years. Government incentives, except for the readjustment period immediately after the war, have generally been limited. The effect of domestic tariffs on the industry has been one of declining protection because the importance of specific rates has fallen as prices rise. The primary reason for success has been willingness in the industry to invest heavily in product diversification in order to meet the expanding needs of a growing economy.

Until fairly recently, Canada's main role in world trade in iron and steel has been that of an importer. In the late 1920's imports supplied between 55% and 60% of consumption. This fell to about 40% in the late 1930's and 25% in the mid-1950's. Today we import some 10% of our needs, mainly items not produced in Canada. In 1962, however, Canada shifted from being a net importer to a net exporter of iron and steel. Between 1957 and 1960 exports rose from 269,000 tons to almost one million tons. Since 1960 exports have accounted for 12 to 15% of production and were an estimated 1.3 million tons in 1963.

The growth of Ontario's iron and steel industry has done much to boost Canada's international reputation as a steel making and using nation. Canadian capacity is presently some 9.4 million tons and production is currently above rated capacity. Canada has the world's 12th largest steel industry, 8th highest *per caput* production and 6th highest *per caput* consumption. Ontario's iron and steel industry is modern, efficient and competitive and has justifiably earned its 84% share of Canadian production.



## (\* Figures for Canada)

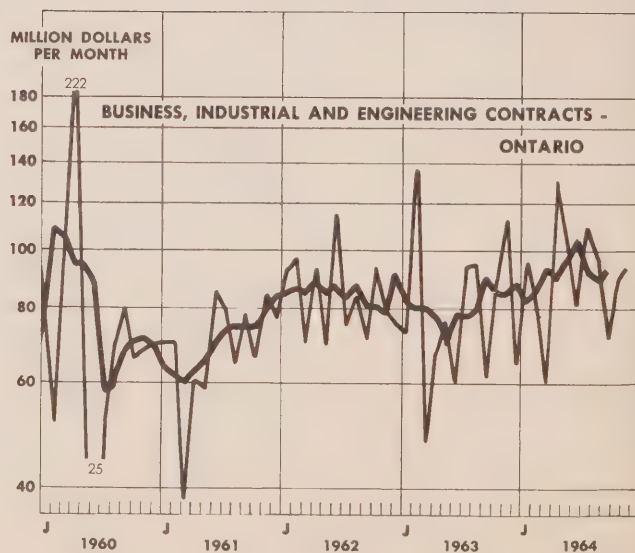
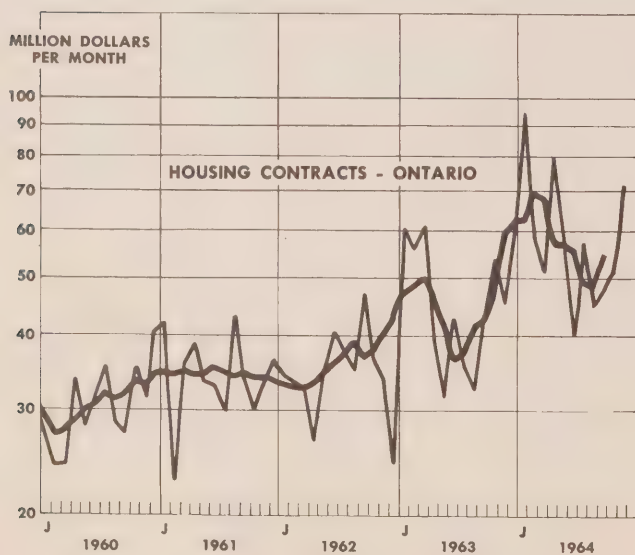
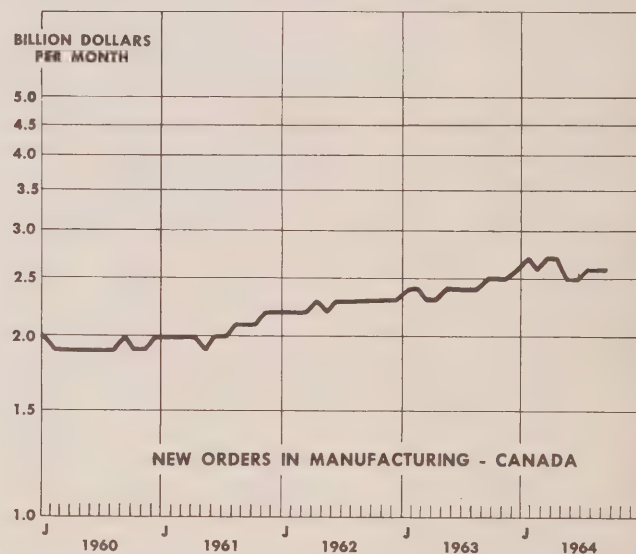
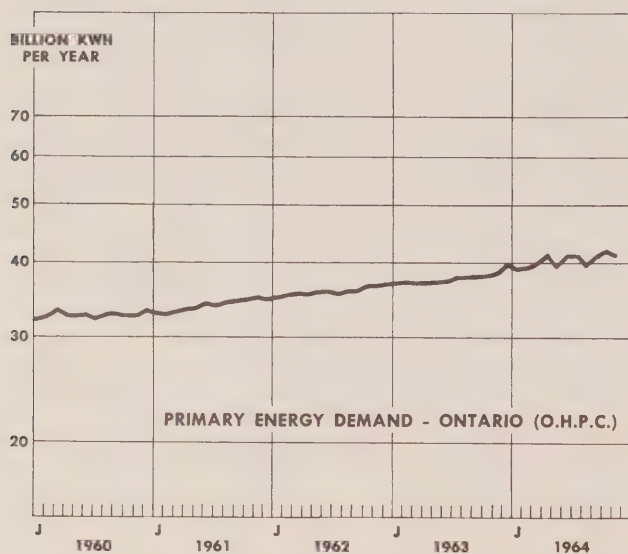
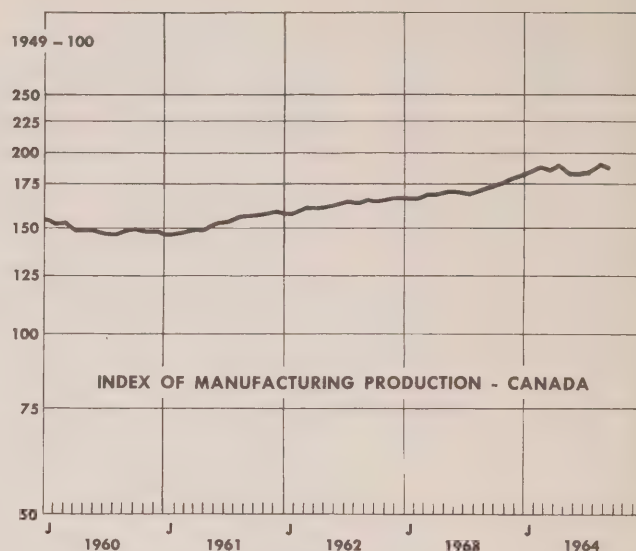
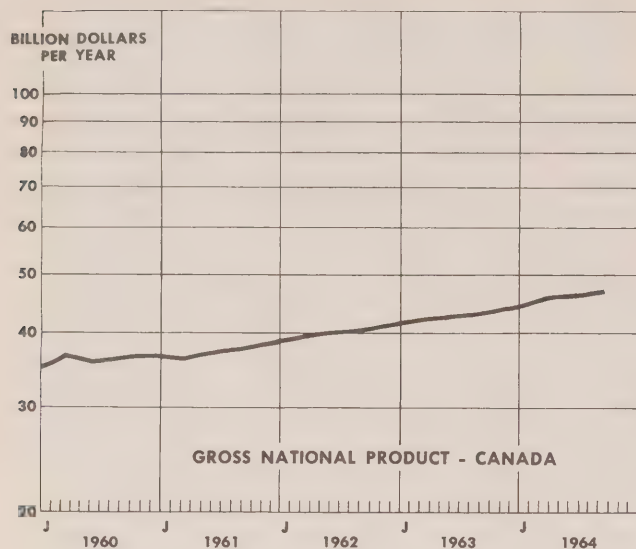
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## COINCIDENTAL AND LAGGING INDICATORS

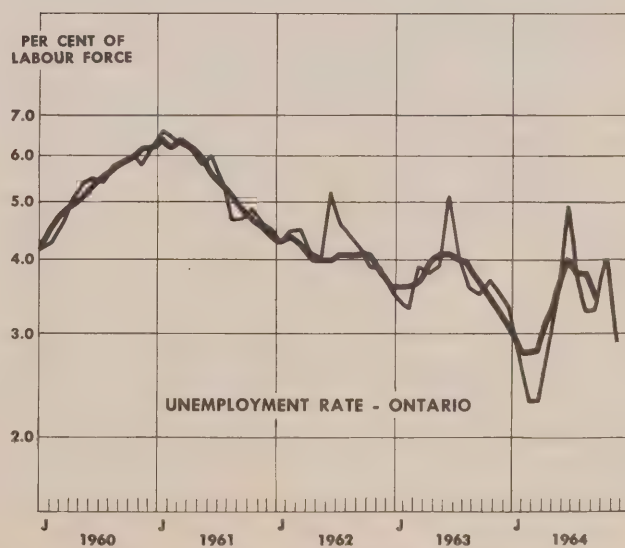
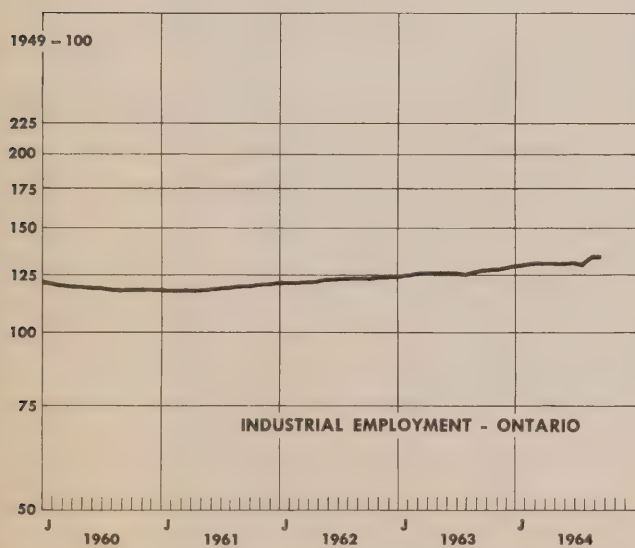
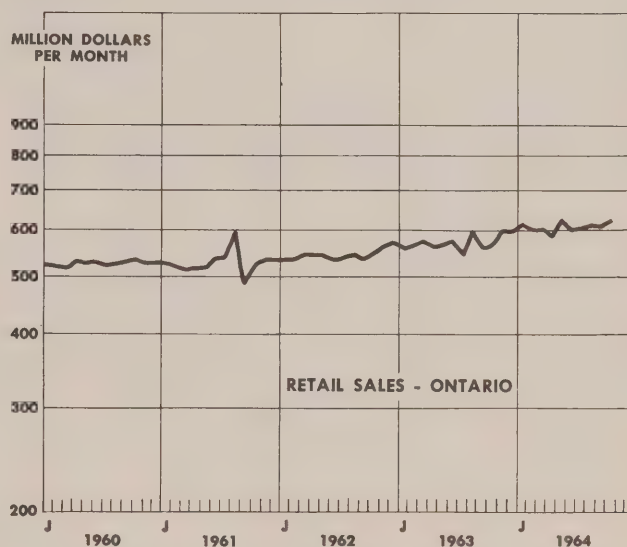
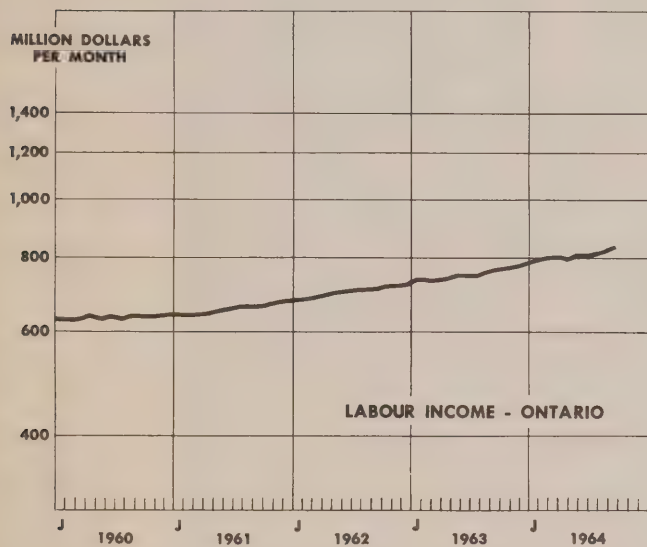
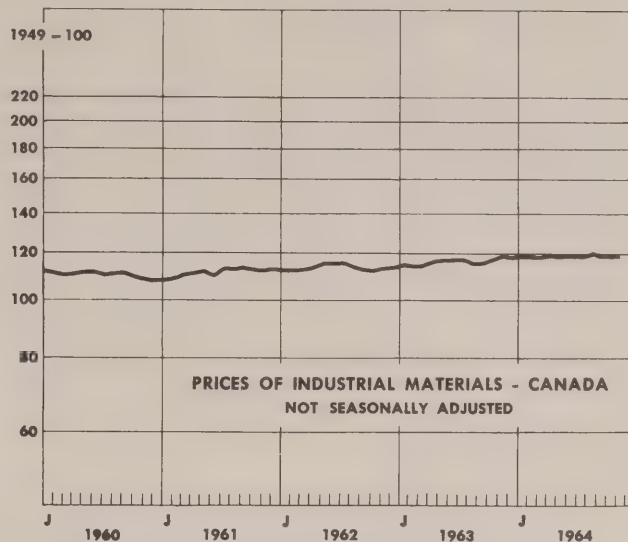
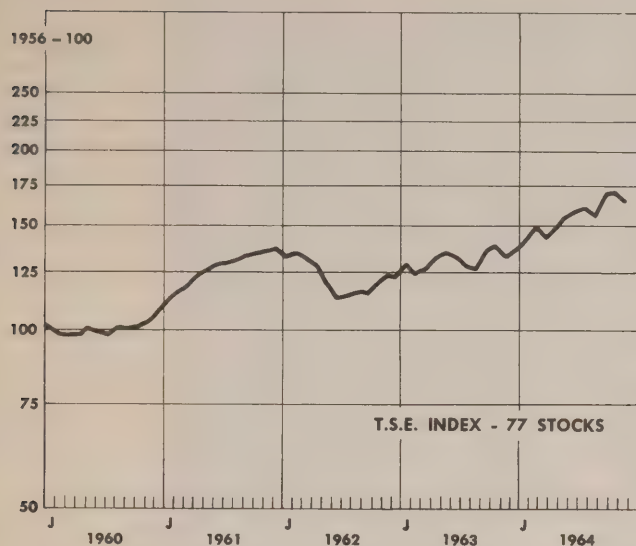
ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED

	1935-39=100	254.9	258.8	257.5	259.5	258.6	257.1	258.8	258.7	257.8	257.3	259.9	258.8	258.9	260.4
Prices, Industrial Materials*															
Domestic Exports*	\$ Million	624.7	670.4	638.9	619.0	535.1	583.1	651.4	670.5	774.6	772.4	674.1	725.4		
Imports for Consumption*	\$ Million	623.6	623.9	564.8	566.1	512.6	576.6	703.9	657.7	689.0	637.9	563.4	616.9		
Foreign Exchange Reserves*	\$ Million U.S.	2,581	2,621	2,595	2,582	2,542	2,466	2,481	2,509	2,534	2,534	2,576	2,625	2,687	2,743

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES





PERIODICALS READING ROOM  
(Humanities and Social Sciences)



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# ONTARIO ECONOMIC REVIEW

DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. S. J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*





# THE ONTARIO ECONOMY

The year 1964 has been a record producing period in many spheres of economic activity. The Canadian Gross National Product ran approximately 8% higher than the previous year. In Ontario, construction and manufacturing are at record levels and unemployment is at the lowest rate since 1956. Due to high levels of demand, retail sales have been averaging 6% gains over the previous year. In the foreign sector, gains in merchandise exports for the first ten months surpassed increases in imports. Though travel, interest and dividend accounts have deteriorated somewhat, the surplus on merchandise trade has resulted in a small decrease in the current account deficit.

## PRODUCTION

The seasonally adjusted Canadian index of industrial production for November was 219.6 based on 1949 = 100. This was a 2.5% increase over the previous month, and a gain of approximately 8% over the November, 1963 figure. A comprehensive breakdown of the index for October (213.6) is available. During that month, mining gained 3.1% over September, non-durable manufacturing gained 1.1%, durable manufacturing declined 2.9% and electric power and gas utilities increased 2.6%.

After declining for three consecutive months, the Canadian mining index moved forward to 317.8 seasonally adjusted. Metals gained 4.5% from September levels due mostly to increased production of nickel, iron ore and copper. Gold production declined slightly. Non-metals, mainly asbestos, increased 6.1% and fuels increased slightly due to increases in the production of natural gas and petroleum. There was a slight decrease in coal production.

The increase in non-durable manufacturing production was caused by gains in food and beverages, paper products, printing and publishing and petroleum and coal products. The clothing, textiles and rubber product indices declined from September levels. The seasonally adjusted durable manufactures index declined to 190.6 from a September level of 196.3 because of a layoff at General Motors due to a strike in the United States. The products of wood, iron and steel, and non-ferrous metals gained 3.2%, 2.1% and 4.3%. The increase in the electric power and

gas utilities index was due mainly to an 8% increase over September in the production of gas.

Preliminary figures indicate that total motor vehicle production in 1964 was 668,508 units. This is a record high and is 6% above production in 1963. The production of cars and commercial vehicles increased 5% and 11% respectively. It had been hoped that production might total 700,000 units but layoffs and strikes affected the industry in October, November and December.

Canadian production levels of steel and pig iron were record highs in 1964. The December production of 756 thousand tons of steel ingots led to an annual production of 8,968 thousand tons, an increase of over 11% compared with 1963. Pig iron production for the year was 6,540 thousand tons resulting in a similar gain of 11%. With large construction awards placed recently, this trend is likely to continue.

## CONSTRUCTION

Construction was at a record high in both Canada and Ontario in 1964. During the year, the national and provincial totals of contracts awarded in all fields were \$4.4 and \$1.8 billion — increases over 1963 of 20% and 23% respectively.

In Ontario, industrial building awards made the highest relative increase, up 53% to a 1964 total of \$196 million. Residential construction awards rose 35% to \$702 million level due mostly to the 75% increase in apartment contracts. Business contracts, including both private and public investment, increased by 17%. In this category, contracts for office buildings and warehouses displayed the largest relative increases with gains of 80% and 26% respectively. Total engineering, however, declined by 3% to a \$287 million level.

During 1964, dwelling unit starts and completions in Ontario centres of 5,000 population and over numbered 57,446 and 50,630 respectively. The larger metropolitan centres experienced changes from 1963 in dwelling unit starts as follows: Hamilton 47%, Kitchener 21%, London 25%, Ottawa -24%, Toronto 23%, and Windsor 55%. In Toronto this increase was due entirely to apartment and row house building (up 42% to 18,404 dwelling unit starts). Single, semi-detached and duplex starts in

Toronto remained the same as in 1963 (about 10,400).

December construction was stimulated by the fact that on January 1, 1965 building materials were to face a scheduled increase in Federal sales tax from 8% to 11%. On a seasonally adjusted basis, housing contracts and business, industrial and engineering contracts were valued at \$75.7 million and \$120.3 million respectively.

In the following table, there is a list of the larger construction awards placed recently in Ontario. Contracts of \$1 million and over (not all of which are listed in the table) accounted for approximately 40% of the total construction awards registered in December.

LARGE CONSTRUCTION AWARDS  
PLACED RECENTLY IN ONTARIO

<i>Location</i>	<i>Value \$ million</i>	<i>Description</i>
London	1.4	School
Napanee	1.2	Hospital
Niagara Falls	1.5	Hotel expansion
North York Twp.	1.4	Apartments
Oakville	4.3	Plant extension
Ottawa	5.5	Plant and office buildings
Ottawa	2.0	University building
Porcupine	4.3	Hospital
Port Arthur	1.0	Library
St. Catharines	3.0	Stores and apartments
Sarnia	5.0	Chemical plant
Toronto	13.9	Apartment and apartment hotel
Toronto	1.9	Spadina Expressway
Toronto	2.9	Stores and office buildings
Waterloo	4.5	Hotel and shopping centre
Welland Canal	1.2	Lock reconstruction
Various Locations	3.3	Provincial roadwork

#### EMPLOYMENT AND INCOME

High levels of construction and production during 1964 were reflected in an improved employment record in Ontario. For the year, the number of employed averaged 2,460 thousand, an increase of 89 thousand over 1963. Considering that the labour force averaged only 78 thousand more than in the previous year, the number unemployed was lower by 11 thousand. In fact, the unemployment rate for the year, at 3.3%, was the lowest since 1956.

The December labour force statistics indicate that employment continues to be at a high level in

Ontario. Seasonally adjusted, the labour force numbered 2,558 thousand of whom 2,489 thousand were employed. The 69 thousand unemployed gave rise to a 2.7% unemployment rate. At the National Employment Service offices in Ontario, the number of applicants was 12% less than during December, 1963. In some lines of work, the limited number of applicants has prompted employers to waive their age restrictions and hire older, qualified workers.

The seasonally adjusted provincial labour income in October was \$833 million. Though this was an increase of 8.6% over October, 1963, it was a decline of 0.8% from September, 1964 corresponding to a decline in the number employed in the same period.

#### SALES

In the first eleven months, retail sales in Canada and Ontario were valued at \$17,878.7 million and \$6,587.5 million respectively. This represented increases of 6.3% and 5.5% over the comparable period of 1963. In Ontario sales of variety goods, department store goods and lumber and building materials showed the greatest increases over 1963. Sales of shoes, drugs and miscellaneous goods showed the smallest increases. Fuel sales were 5% lower than during the eleven-month period in 1963.

On a seasonally adjusted basis, retail sales in November were slightly higher than in October for Canada but lower for Ontario. The Ontario reports were \$623 million and \$618 million for October and November respectively — a decrease of about 1%. This was partially due to small, non-seasonal declines in sales by grocery and combination stores, garage and filling stations, and outlets for women's clothing, hardware and drugs.

Wholesale trade reports for the year are not as complete. For the first nine months, the Canadian total for all trades was \$8,377.9 million, an increase of 10.8% over the comparable period for 1963. Sales of electrical wiring supplies, construction materials and related equipment displayed the largest gain (24%), followed by sales of farm machinery (20%), industrial and transportation equipment (17%), and meat and dairy products (14%).

Preliminary estimates for passenger cars sold in Canada indicate that 1964 was a record year with sales of 549,520 North American cars, an increase of 9% over 1963. Ontario sales figures are only available up to November during which month 19,227 cars were sold. This was a decline from October due mostly to the recent declines in production suffered by Ford and General Motors. For the January to November period, car sales in Ontario numbered 233,880 units, an increase of 12% over the same period in 1963. In a comparable eleven-month comparison, sales of commercial vehicles in Ontario numbered 33,444 units, an increase of 16% over the previous year.



## PRICES

The Canadian consumer price index was 136.8 for December based on 1949 = 100. This was 0.7% higher than that of November due to increases in six of the seven main components. The tobacco and alcohol index remained unchanged.

Over the year, the consumer price index rose 1.9%. This is slightly below the 2.0% average annual increase in the last fifteen years, and reflects the price stability of the current boom. Housing and clothing prices increased by 1.9% and 1.8% respectively. Prices of recreation and reading, food and transportation increased by approximately 1.5% each. Tobacco and alcohol prices advanced 2.6% due to higher prices for cigarettes and liquor. The health and personal care component advanced the most — up 5.4% — due mainly to more expensive optical care, prepaid medical care, dentists' fees and personal services.

The wholesale price index of 30 industrial materials was at 257.5 in December (1935-39 = 100). This was down slightly from November. Prices declined for tin, raw sugar, raw wool and hogs. Prices for white lead and raw rubber increased. Canadian farm prices advanced 1.1% from November due to increases for potatoes, tobacco, corn, hay, rye, eggs, calves and poultry. Compared to December, 1963, the general wholesale index was virtually unchanged. Decreases in the prices of vegetable products and textile products were offset by increases in the prices of animals, wood, iron, non-ferrous metals and chemicals. Non-metallic mineral prices were unchanged.

## FINANCE

The importance of external developments on monetary conditions in Canada was clearly visible during 1964. The passage of the U.S. Interest Equalization Tax Bill and the measures introduced by the United Kingdom to stabilize sterling had an immediate impact on Canada's interest rate structure. The effects of internal developments, on the other hand, were less discernible. Prominent amongst these were discussions pertaining to structural innovations in Canada's financial system, measures designed to encourage greater Canadian ownership and the possible establishment of a Federal-Provincial pension plan.

Over the year, the total supply of money in Canada rose by just over \$1 billion to close at a level of \$17.9 billion. This is a 6% advance over the previous year. The rate of increase in general bank loans, however, exceeded 15%, rising by \$1.1 billion to a total of \$8.2 billion.

Prime finance and commercial paper rates fluctuated narrowly throughout most of 1964, but, subsequent to November's Bank Rate adjustments, closed the year higher on average by one-quarter of

one per cent. This rise in costs of borrowing was signalled by the increase in Canada's Bank Rate on November 24, from 4% to 4¼%, which followed the increase in the U.K. Bank Rate from 5% to 7% and the related increase in the U.S.A. from 3½% to 4%.

Bond prices similarly fluctuated within a narrow range until November when sharp price reductions occurred as a consequence of the Bank Rate adjustments. Thereafter, however, price recovery prevailed and most outstanding issues closed the year at levels fractionally ahead of those quoted at its commencement. This price recovery narrowed substantially the spread between Canadian and U.S. interest rates. Long-term rates in Canada, which previously were about one percentage point above U.S. rates, closed the year only four-fifths of a percentage point above the U.S. rates.

New Canadian bond financings during 1964 totalled \$4.5 billion, up 11% from the \$4.1 billion raised in the same period last year. Eighty-five per cent of the new borrowings were raised in Canada and the remaining 15% in the U.S.A. A considerable increase in new Canadian provincial, municipal and corporate borrowing occurred immediately prior to and after September 2, 1964 when exemption conditions for Canadian issues were clearly established by the passage of the U.S. Interest Equalization Tax Bill. This concurred with a slight decline in the volume of issues which were domestically distributed. The largest percentage increase in overall new bond financings occurred in the corporate sector which rose by almost 53%. New corporate bond financings exceeded \$1 billion as compared with \$0.7 billion last year.

The Province of Ontario went to the market on two occasions in calendar 1964 for a total borrowing of \$110 million as compared with \$120 million in calendar 1963. In addition, the Province guaranteed principal and interest payments of \$140 million worth of new Ontario Hydro-Electric Power Commission bonds floated during calendar 1964.

Stock market sensitivity to domestic and foreign events was particularly evident towards the end of 1964. Nevertheless, stocks generally registered larger price gains than in 1963. For example, the Toronto Stock Exchange Industrial Index closed the year at at level of 165.91, an increase of almost 21% as compared to an 11% appreciation in 1963. Preliminary estimates of trading on the six exchanges in Canada indicate that new record volumes and trading values were set in 1964, with 1.9 billion shares traded at a value of \$4.3 billion. This compares with the previous record year of 1955 when 1.8 billion shares changed hands with a value of \$3.9 billion.

Canada's official holdings of gold and U.S. dollars reached an all-time high of \$2,743.4 million by the end of November with all obligations to the International Monetary Fund incurred in June 1962 repaid in full. At the close of 1964, however, this total



had declined by \$69.1 million to \$2,674.3 million. Seasonal factors together with a special loan of \$60 million through the International Monetary Fund to the United Kingdom were the principal factors accounting for this decrease in reserves.

The value of the Canadian dollar in terms of U.S. funds appreciated substantially throughout most of 1964. Such influences as increased foreign receipts from Canada's export markets and accelerated borrowings in New York were the major contributing factors to this upward trend. From a low of 92.39 cents in April the rate advanced to a high of 93.23 cents in November, the highest level attained since it was pegged at a parity value of 92.50 cents in May 1962. Despite a slight deterioration in December due to seasonal influences, the rate nevertheless closed the year at a level of 93.12 cents.

#### FOREIGN TRADE

October was the sixth consecutive month in which Canada had a merchandise trade surplus. Exports for the month were valued at \$670 million resulting in a 7% increase from October, 1963. During the first ten months, exports were \$6,674 million — an increase of 22% over the comparable period for the previous year. Exports to the United States, the United Kingdom and the European Common Market rose 12%, 18% and 20% respectively over the January to October period of 1963. If this trend continues, exports for the year may total \$8 billion.

Exports of food, feed, beverages and tobacco rose substantially in 1964, due mostly to wheat deliveries to Russia. For the first ten months, sales of wheat and wheat flour were valued at \$970 million — greater than the value of exports of all end products. Exports of fish, fresh meat, and dairy produce showed gains of 14%, 29% and 138% respectively. Exports of whiskey and tobacco were 12% and 26% higher over the January to October period in 1963. Exports of a few commodities including sugar, oil-seed cake and vegetables declined slightly.

Crude material exports rose 12% over the January to October period of 1963. Foreign-destined ship-

ments of iron ore and concentrates, scrap iron, copper, zinc, lead, natural gas, petroleum, asbestos and flaxseed displayed strong gains. Exports of pulpwood, raw hides, skins and furs, and some vegetable products remained virtually the same as those of 1963. Exports of radioactive ores and concentrates declined by 46% from the \$125 million level for ten months of the previous year.

Exports of inedible fabricated materials were 13% above those of the first ten months of 1963. Showing strong increases were exports of wood pulp, newsprint paper, fertilizers, synthetic rubber, products of petroleum and coal, primary iron and steel products, zinc, lead and copper. Exports of lumber remained virtually the same as those of the January to October period last year.

Fully manufactured exports rose 42% in a ten month comparison with 1963. Though increased exports of aircraft under a special defense contract were responsible for an increase of approximately \$100 million, exports of other commodities in the manufactured group rose by at least 28%. Exports of industrial machinery, farm machinery, and motor vehicles rose substantially.

Merchandise imports were valued at \$637 million during October, resulting in a ten-month total of \$6,161 million — up 14% from the cumulative period of the previous year. Though details are only available for August, the pattern for the year will likely follow closely that of the first eight months. Imports of food, feed and beverages and inedible crude materials were approximately 7% above those in the January to August period of 1963. Imports of fabricated materials and fully manufactured goods increased 16% and 20% respectively in the same comparison. Among the latter two categories imports of iron and steel, special industrial machinery and motor vehicles and parts rose substantially.

In terms of dollar value, the largest import gains occurred in trade with the United States. For the first eight months, total imports from the U.S. were valued at \$3,413 million — up 17% from the same period in 1963. In a similar comparison, imports from the United Kingdom and the European Common Market rose 15% and 20% respectively. Imports from Japan rose 32%.

# OIL AND NATURAL GAS IN ONTARIO

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## I OIL AND PETROLEUM PRODUCTS

### HISTORY

The first commercial oil well on the North American continent was dug in Ontario just a little over a century ago. It preceded, by at least one year, the famous Drake well of Pennsylvania, drilled in 1859.

The Centennial, held at Oil Springs (Lambton County) in 1958, commemorated this great event and honoured the man responsible for it: J. M. Williams. This oil well, in Enniskillen Township, would have been sufficient to secure him a place in Ontario's history, but Mr. Williams went further. He built Canada's first commercial refinery and produced a high grade illuminating oil which earned him a gold medal at the International Exhibition in London, England, in 1862. (He was also awarded another gold medal for being the first to produce crude oil.)

The discovery at Oil Springs attracted many others and soon the area became a major oil producing and refining center. In the mid-1860's oil was struck at Petrolia and, while the spectacular 'gushers' at Oil Springs declined, Petrolia offered a more enduring production. For many years its annual oil output was larger than that of any other Ontario field. In 1889 there were 3,500 wells in the Oil Springs - Petrolia area.

Here is how V. Lauriston, in his book *Blue Flame of Service*, summarizes the significance of this oil town:

"Petrolia became the recognized oil Capital of Canada. Here the early problems of the oil industry were worked out; here many of the early refineries were located; here the jerker-rod system of pumping a string of wells with a single engine was devised; here, following the great fire, underground storage was evolved; here was the home town of a host of expert drillers who, skilled in the Canadian or pole-tool system, helped through many decades to develop far-off foreign fields."

As additional discoveries were made in the South-western corner of the Province (Welland, Essex, Kent and Elgin Counties), the production of oil increased steadily. From a modest 114,000 barrels in 1863 (the first year for which statistics are available) it reached an impressive 835,000 barrels in 1895. Then a long period of decline followed (reaching an all-time low of 113,324 barrels in 1945). Between 1920 and 1952, with the exception of three years, 1939, 1949 and 1950, production remained under 200,000 barrels annually. In 1953, with the greatly

increased production of the Rodney field, oil output again started to grow. It stood at 299,685 barrels in that year and rose uninterruptedly to an all-time high of 1,205,376 barrels in 1963. The Rodney field, in Elgin County, continues to hold its strong producing position, followed by Clearville (Kent County) and Gobles (Oxford County). These three major oil fields produce more than half of Ontario's oil.

With rapidly developing new uses for petroleum products (particularly after the appearance of the automobile) Ontario's oil producers were not able to supply the growing needs within the Province. Although the output of oil-producing Southwestern Ontario wells is greater now than ever before — an all-time high of 1.2 million barrels in 1963 — it can supply but a negligible portion of the Province's enormous consumption. In the early postwar years most of the oil needed here was imported from the United States. With huge oil discoveries in the Prairie Provinces the situation has radically changed. According to the latest available statistics, 98 per cent of the crude oil received by Ontario refineries originates in Western Canada, 1.3 per cent is produced locally, the rest, an infinitesimal 0.7 per cent, is imported from abroad (Venezuela).

The most economical overland transportation of oil is by pipeline. In 1953, the Inter-Provincial Pipe Line was first extended into Ontario (Sarnia), later, in 1957, to Port Credit, delivering Western Canada crude oil to the Province's gigantic refineries and petrochemical plants. The Trans-Northern Pipe Line brought oil products from the Montreal refineries to storage facilities in Ottawa and Southern Ontario until 1963, when it discontinued deliveries to areas west of Brockville, fostering the aims of the National Oil Policy.

### REFINING

Canadians consume refined petroleum products at the amazing rate of 1,265,000 gallons per hour, or almost two gallons per day for every man, woman and child in the country! And this rate is increasing by about 4 per cent annually. The refining sector is the most fully developed operation in the petroleum industry. Expansion and modernization programs in recent years have transformed the Canadian industry into one of the most modern in the world.

In 1963, Canada's crude oil refining capacity exceeded one million barrels per day. During that



year, Ontario became the leading province in crude oil refining with 305,470 barrels daily or 30.2 per cent of total Canadian capacity.

Ontario's recent addition, a new refinery at Oakville owned by Shell Canada Limited, is one of the most advanced in design in the world. This operation will contribute substantially to the objectives of the National Oil Policy, which stipulates that petroleum products required in Canada, west of the Ottawa Valley, be derived from domestic oil. By the end of 1963, the Ontario refining industry was oriented towards meeting the normal product requirements for the province west of the Ottawa Valley. As a result, the Trans-Northern Pipeline Company that carried products from Montreal to as far west as Hamilton discontinued deliveries to Ontario west of Brockville.

Crude oil processing in Ontario commenced over a century ago. The first simple plant established by James M. Williams, the father of the Canadian oil industry, produced illuminating oil from the crude product of Williams' well at Petrolia. Additional rich strikes at Oil Springs led to a rapid expansion of the processing industry. By 1864, there were 27 stills in the Hamilton area alone. One, The Ontario Carbon Company, had a daily capacity of 2,500 barrels — quite a remarkable figure for that period. Within a few years, London became Canada's leading refining centre. In 1868, there were over 40 small refineries in the London area which, after twenty years, were consolidated into two major plants.

Refining at that time was basically a distilling operation. The desired end-product, kerosene, was derived by heating crude oil to a certain temperature, then drawing off and condensing the desired fraction. The other products of distillation like gasoline, fuel oils and asphalt were wasted by-products. But the situation was soon to change. When Henry Ford introduced his horseless carriage in the last decade of the nineteenth century, gasoline, the by-product that so far had little more than nuisance value, suddenly rose to prominence to become eventually the major product of crude oil in the twentieth century.

Meanwhile, there was a significant amount of consolidation between smaller producers. By 1910, only two refineries dominated the scene in Ontario — Imperial Oil Company at Sarnia and Canadian Oil Company at Petrolia — producing about one million barrels per year.

In the years that followed, the increased number of motor-powered vehicles — and later, aircraft — spurred demand for gasoline. The constantly improved engines required more and better gasoline.

In 1964, eight of Canada's forty-two refineries were located in Ontario. Except for a small plant near Fort William, these refineries were situated in the Toronto-Sarnia area along the route of the crude oil pipeline from Western Canada of the Inter-

provincial Pipe Line Company. The oldest and largest of these refineries is the Sarnia operation of the Imperial Oil Enterprises Ltd., Toronto, which was established in 1897. This refinery has at present a daily crude oil capacity of 94,000 barrels and a crude storage capacity of over two million barrels.

The following table gives a general picture of the impressive strides of the refining operations in Ontario in more recent years, along with data for Canada as a whole to facilitate comparison.

NUMBER OF OPERATING REFINERIES AND CRUDE OIL CAPACITY, ONTARIO AND CANADA, 1950 AND 1955-63

Year	Ontario		Canada	
	Refineries (No.)	Crude Oil Capacity (bbls/day)	Refineries (No.)	Crude Oil Capacity (bbls/day)
1950	4	72,500	32	358,875
1955	6	148,800	42	618,450
1956	6	159,700	43	700,050
1957	6	198,510	43	761,895
1958	7	228,822	42	827,407
1959	7	254,272	40	853,262
1960	7	260,820	44	950,260
1961	7	260,820	43	961,760
1962	7	279,170	43	987,970
1963	8	305,470	42	1,012,700

In terms of volume, most of the refinery production in Ontario is motor gasoline, light fuel oil and heavy fuel oil. The production of refineries in Ontario can be broken down as shown below.

REFINERY PRODUCTION, ONTARIO, 1963 (bbls)

Liquefied Petroleum Gas (L.P.G.)	4,930,113
Petro-chemical feed stock	1,101,884
Naphtha specialties	1,425,354
Aviation gasoline	102,446
Motor gasoline	34,012,218
Aviation turbine fuel	1,719,666
Kerosene and stove oil	4,134,926
Diesel oil	6,484,105
Light fuel oil (#2 & #3)	19,496,104
Heavy fuel oil (#4, #5 & #6)	15,156,285
Asphalt	2,118,741
Coke <sup>(1)</sup>	564,761
Lube oils and grease	899,159
Others <sup>(2)</sup>	2,159,898

<sup>(1)</sup> Includes catalytic carbon.

<sup>(2)</sup> Includes wax and candles, still gas, and minor other products.



## TRANSPORTATION

The world's longest crude oil pipe line, Inter-provincial Pipe Line, carries crude oil over the 1,920-mile stretch between Redwater, Alberta and Port Credit, Ontario. Due to the fact that the major producing centres in Western Canada have no access to water transportation, pipe line transmission is the most economical method of oil delivery to Eastern Canada. These arteries are being very efficiently utilized; "batching" allows different products to be transmitted on the same line without mixing. The whole operation is continuous, almost automatic. Usually it takes six weeks for oil to travel by pipe from the West to Eastern Canada.

Railway tanks are more useful in regional distribution as well as in carrying specific products. Pressure cars are specifically designed to withstand high pressures of compressed gases, e.g. liquefied petroleum gas (L.P.G.). Asphalt, which requires melting prior to loading and unloading, is carried in insulated cars.

For local distribution to service stations and houses, tankwagons are the most versatile medium. From a capacity of 500-1,500 gallons in the early 1900's, these carriers have grown to hold up to 7,000 gallons in the form of the modern aluminum trucks.

## PETRO-CHEMICALS

In attempts to produce better fuels, scientists learnt how to split complex hydro-carbon molecules and re-form smaller ones to create new compounds that did not exist before. This was the accidental beginning of petro-chemistry.

By volume, the major petro-chemical product is ammonia. Its applications range from fertilizers and refrigerants to explosives and the manufacture of nitric acid. A second major petro-chemical is ethylene, used as anti-freeze, cleaning solvent and in packaging. Moulded ethylene finds application in toys, furniture, squeeze bottles and wire and cable coating.

Among the many other products of petro-chemistry may be listed such diverse products as resins, synthetic rubber, synthetic fabrics, insecticides, herbicides, solvents, adhesives, cosmetics, lacquers, dyes and a number of other products. Of these products, synthetic rubber played a most prominent part during the Second World War. In 1941, when the allied sources of natural rubber were cut off, a major cooperative program between the U.S. and Canadian Governments and the petroleum and chemical industries was designed to overcome the shortage of this strategic material. In two years, Canada was able to produce 900,000 short tons of synthetic rubber. The Polymer Corporation Ltd. at Sarnia was the most complete operation of its kind. With the return of natural rubber at the conclusion of the war, many similar operations in the U.S. ceased produc-

tion, but the integrated Sarnia plant sustained a highly competitive and successful operation both at home and abroad.

## II NATURAL GAS

### HISTORY

Ontario accounts for almost 40 per cent of natural gas consumption in Canada. Although only about 8 per cent of the volume consumed is produced within the Province, the development of natural gas in Ontario preceded that of Western Canada by several decades.

The foundation for the natural gas industry in Canada was laid by Eugene Coste, in 1889, when he completed his first gas well in Essex County. This remarkable well had a daily capacity of some 10 million cu. ft. and remained the largest of the many wells that followed in the area. Although the Essex gas field seemed promising in the beginning and was often referred to as "inexhaustible", fifteen years later the field's reserves were depleted and the gas supply was cut off from customers.

Also in 1889 a syndicate organized by Denis and Eugene Coste started drilling operations near Port Colborne and struck gas in the same year. Unlike the Essex field, the many wells drilled in this area (County of Welland) proved long-lived. The increased search for natural gas resulted in a large number of producing wells in Kent, Lambton, Norfolk and Haldimand counties and before the beginning of the First World War a considerable network of gas pipelines covered Southwestern Ontario.

Exploration extended into Lake Erie when, in 1913, the first offshore well was drilled 320 feet offshore from the township of Romney. It is believed that this was the first well of its kind ever drilled on the North American continent. The first truly offshore gas well, however, is considered to be the one drilled in 1943 off Romney township in 35 feet of water, 6,200 feet offshore. Of the 2,449 producing gas wells recorded in 1963 in Ontario, 172 were offshore.

Production and distribution of natural gas increased gradually until 1908, and then accelerated to reach a peak of 20 million MCF (thousands of cubic feet) in 1917. After World War I, gas output declined to some 8 million MCF per year and it remained at this level until 1936 when it began to move upward to 13 million MCF in 1940. Another decline set in during the years of the Second World War and production continued to be at a low level until 1953 when it began to rise again. By 1960, annual production amounted to some 17 million MCF which was followed by a sharp drop in the following year (14.5 million MCF). Output in 1963 was nearly 16 million MCF. It is estimated that 1964 production was below that of the previous year.

The supply of home-produced natural gas could not keep pace with Ontario's rapidly growing demand, and over the years it has been supplemented with manufactured gas and imports from the United States. However, not until the trans-Canada pipeline was completed in 1958, did natural gas become abundantly available to Ontario households and industries. Consumption skyrocketed from a modest 35 million MCF in 1957 to 167.6 million MCF in 1963. In the first nine months of 1964, natural gas sales to customers were nearly 14 per cent greater than in the corresponding period of 1963. In view of the anticipated further rapid growth of the demand for natural gas, the expansion of presently existing carrying facilities seems necessary. Trans-Canada Pipe Lines Ltd. recently announced a \$200 million program proposing, unlike the existing all-Canadian line, a less expensive route through the United States.

Before Western gas was piped into Ontario, natural gas was largely used by householders in the production areas. At present, residential use still accounts for some 40 per cent of total consumption. In 1960, 15 per cent of Ontario households used natural gas for heating purposes; in 1962 this percentage had risen to 21. Nevertheless, commercial and particularly industrial consumption is growing at a higher rate. Apart from its industrial use as a fuel, increasing volumes of natural gas are used as raw material by the petro-chemical industry.

SALES OF NATURAL GAS, ONTARIO, 1950-63  
(thousands of cubic feet)

1950	9,070,518	1957	35,020,100
1951	10,058,484	1958	51,119,975
1952	11,108,782	1959	83,005,934
1953	12,354,879	1960	103,864,330
1954	13,989,251	1961	125,130,845
1955	20,275,759	1962	149,082,419
1956	26,479,855	1963	167,618,964

SALES OF NATURAL GAS, BY CONSUMER GROUPS,  
ONTARIO, 1954-62  
(billions of cubic feet)

	<i>Residential</i>		<i>Commercial</i>		<i>Industrial</i>	
	<i>Volume</i>	<i>%</i>	<i>Volume</i>	<i>%</i>	<i>Volume</i>	<i>%</i>
1954	10.7	73.3	1.7	11.6	2.2	15.1
1957	21.8	62.3	4.4	12.6	8.8	25.1
1959	37.1	44.6	9.1	10.9	37.1	44.5
1960	42.1	40.5	13.4	12.9	48.4	46.6
1961	48.0	38.3	15.7	12.5	61.5	49.1
1962	55.3	37.1	18.9	12.7	74.9	50.2

## PROCESSING

There are currently three gas processing plants in Ontario. The Union Gas Company of Canada, Ltd. at Chatham operates the largest of these plants at Port Alma, Ontario. The two other plants, at Corunna, are operated by Imperial Oil Limited. All three serve Southwestern Ontario fields.

The history of the natural gas industry in Ontario is relatively recent. When the gas was first discovered in Southwestern Ontario in 1889, marketing was restricted to output from sulphur-free gas fields while wet gas, containing varying quantities of propane, butane and pentane plus, was avoided. But the latter's significance was soon appreciated with the coming of the motor vehicle when demand rose for the gasoline content of the wet gas.

In the early stages, there was a great amount of waste, because a large percentage of liquids in the gas were being lost through inefficient extraction in the field separators. These separators are the simplest gas processing installations and are usually at or near the well. Gas processing today is a more elaborate operation, and separators are now considered as merely field equipment rather than processing plants.

In modern processing, hydrogen sulphide, carbon dioxide and liquid hydro-carbons are among the main constituents extracted from the gas. The lightest of the liquid hydro-carbons is propane, or bottled gas. Heavier products are butanes and pentanes.

The first gas processing operation in Ontario was undertaken in 1924, when the Union Gas Company, Ltd. established, at considerable financial risk, a plant at Port Alma, south of Chatham. This plant, for the first time, applied the Koppers process to natural gas. This process had been successfully used for purifying coal and oil gases in the U.S. and Canada, but never tried with natural gas which requires purification on a larger scale and under higher pressure. The experiment was a success. The Union Gas Co. in 1950 built another plant at the site of the older one with more modern equipment. Two smaller operations were established in the Sarnia district by Imperial Oil Limited in 1961.

## DISTRIBUTION

Although Ontario produces only about 1.4 per cent of the total output of natural gas in Canada, almost two-fifths of all Canadian natural gas sales go to Ontario. Traditionally, Alberta (where the average cost of natural gas is 31 cents per MCF) has been the leading consumer in Canada until Ontario, where the equivalent cost is 87 cents, outstripped Alberta with respect to sales in 1963. Over 41 per cent of all natural gas pipeline-mileage in Canada is within the borders of Ontario. The Province's 9,231 miles of line in 1957 expanded to 16,412 miles in 1963. Of this total, gathering pipelines make



up 1,400 miles, transmission lines almost 4,000 miles and distribution lines more than 11,000 miles.

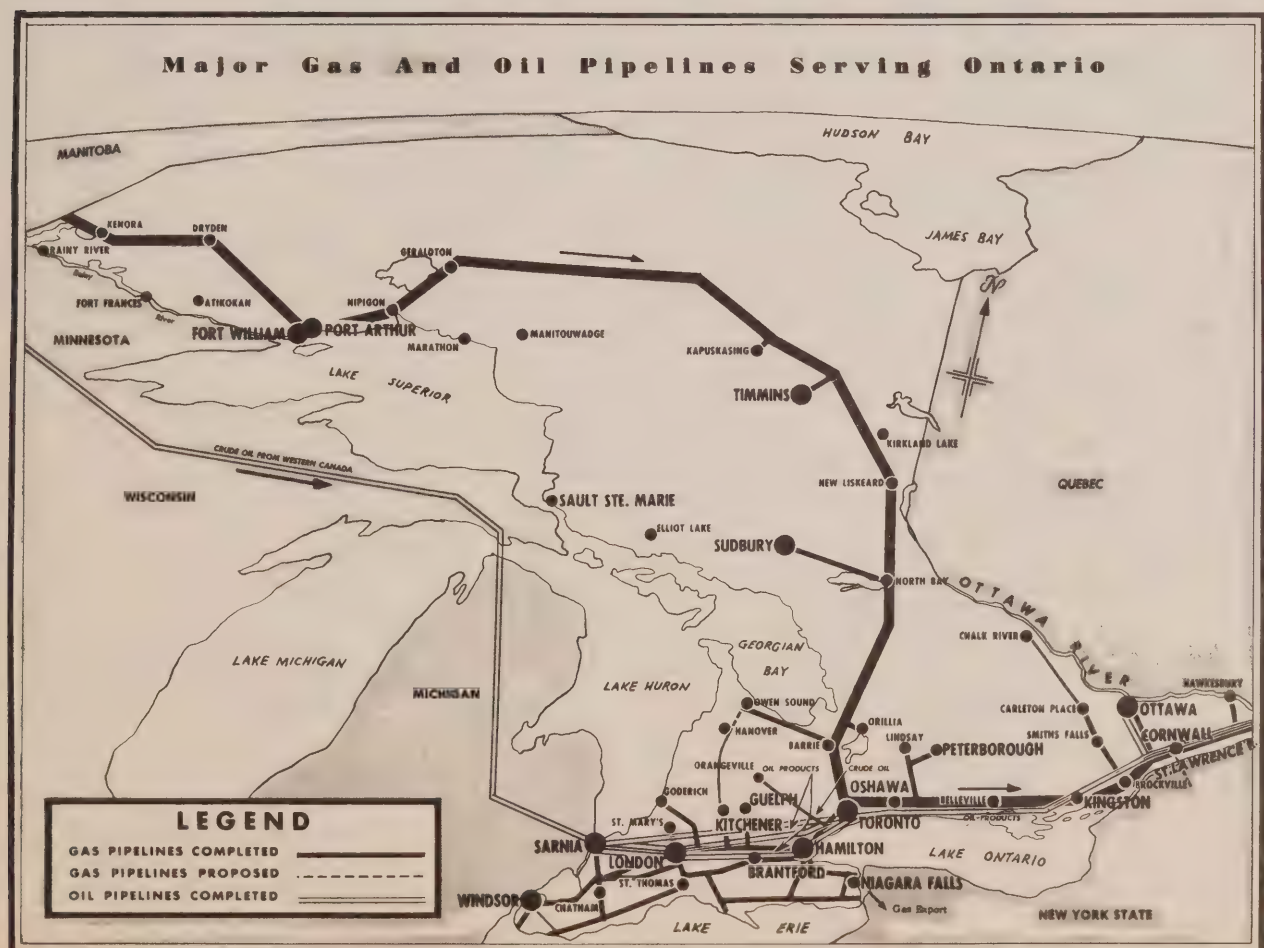
Gas pipelines are the most economical means of transporting the fuel in the long run. For Ontario, this fact was of special significance, particularly when it was realized that the supply of natural gas from Ontario's sources and from the U.S. was not sufficient to meet the Province's expanding needs. Shortly after the war, gas shortages were so acute in Ontario that some users had to look for other sources of fuel. In the early 1950's it was realized that the best solution would be the construction of a gas pipeline from the natural gas fields in Alberta. To protect the public interest, the Ontario Fuel Board was established in 1954 with powers to regulate production, distribution, storage, transmission, sale and use of natural gas sold by companies wholly located in Ontario. As a means of encouraging economic development, it was deemed desirable that the pipeline should pass through Northern Ontario. Moreover, for dependability of supply and control over rates, it was decided that the line should be built wholly in Canada. Because of its interprovincial nature, the line comes under Federal jurisdiction.

In order to make the line economical, it was extended to supply Quebec.

It was feared in the mid-1950's that large-scale exports of the fuel would have to take place to make the line profitable. However, with the tremendous rise in demand for natural gas in Ontario during the late 1950's, it was realized that the transmission capacity of the system would have to be expanded.

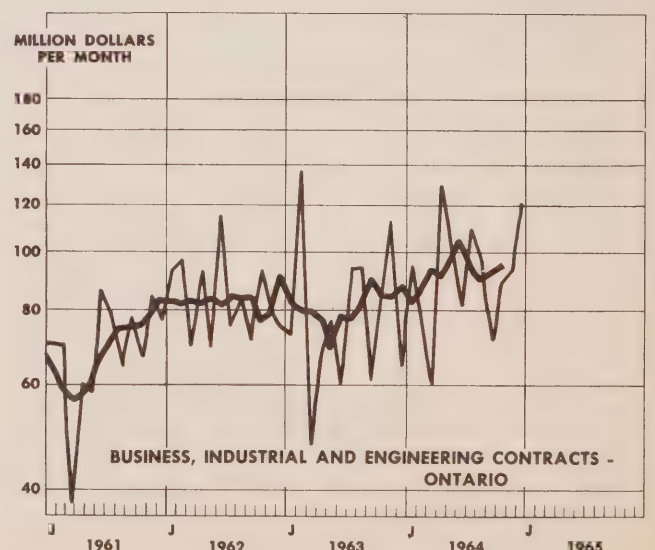
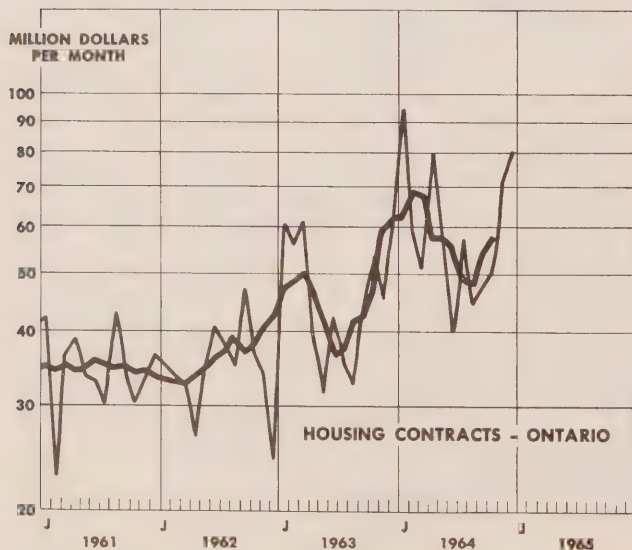
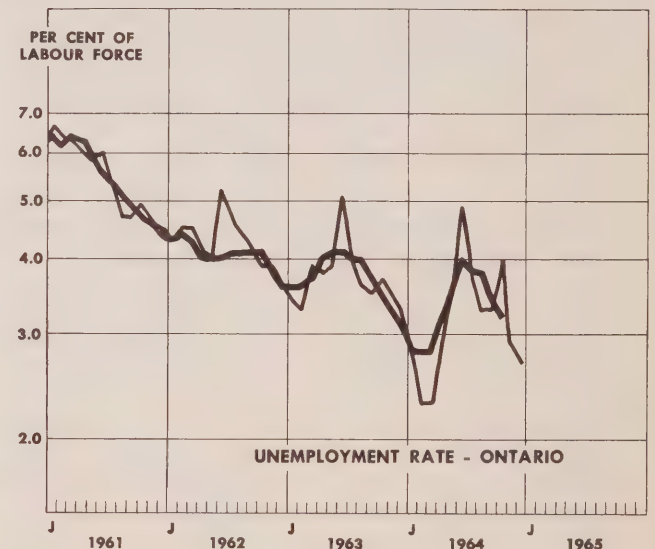
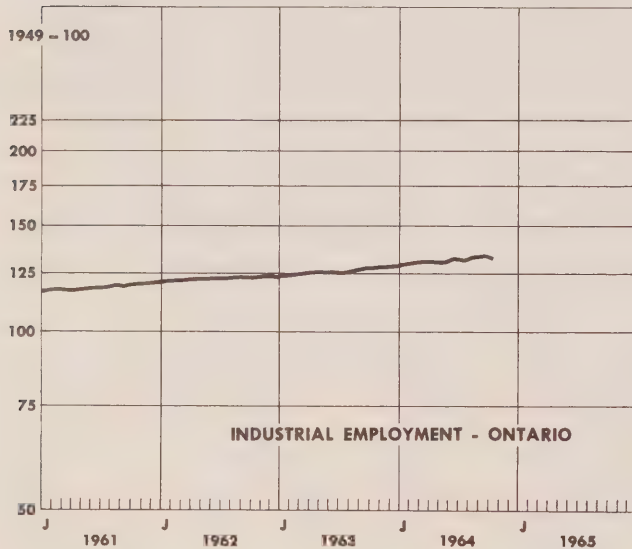
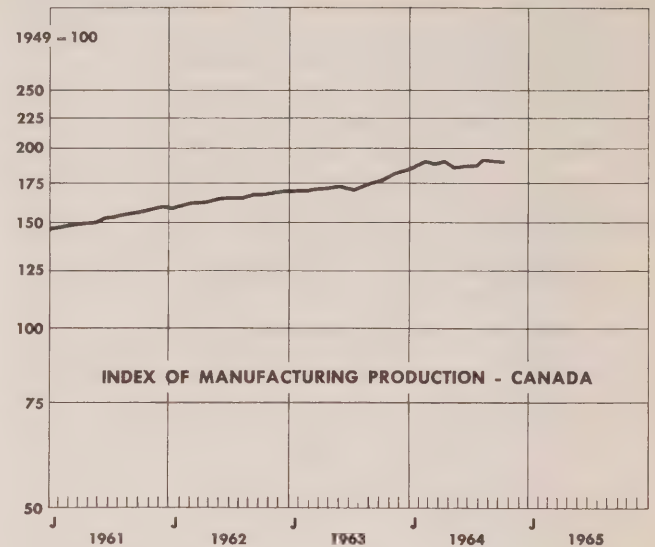
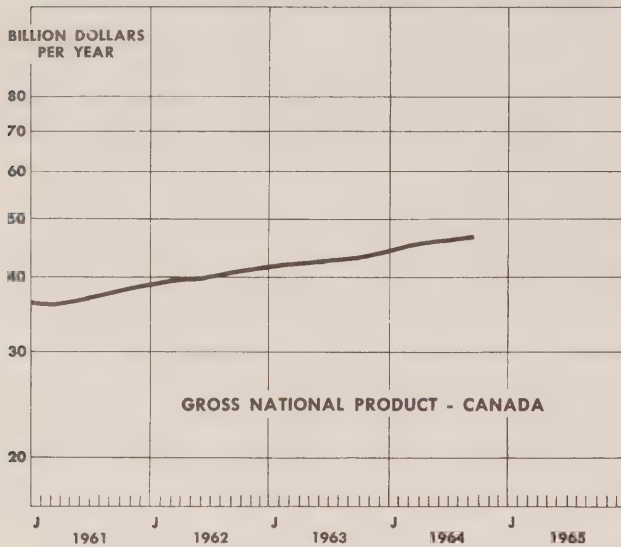
On completion in 1958, the Trans-Canada pipeline bridged the 2,290 miles between Alberta and Montreal. Total cost of the system approximated \$375 million. The following year, the capacity of the line was increased to 400 million cubic feet daily. In 1960, eight compressor stations were added to the ten already in operation. Compression capacity of the transmission system was further increased and by 1962, the line had reached a total capacity of about 900 million cubic feet daily.

Distribution facilities within Ontario have also been extended in recent years. In the early 1960's, the distribution network in Southwestern Ontario of the Union Gas Company was expanded. The Consumers' Gas Company, serving basically the Niagara and Metropolitan Toronto districts, added a small portion of northern New York State to its market.





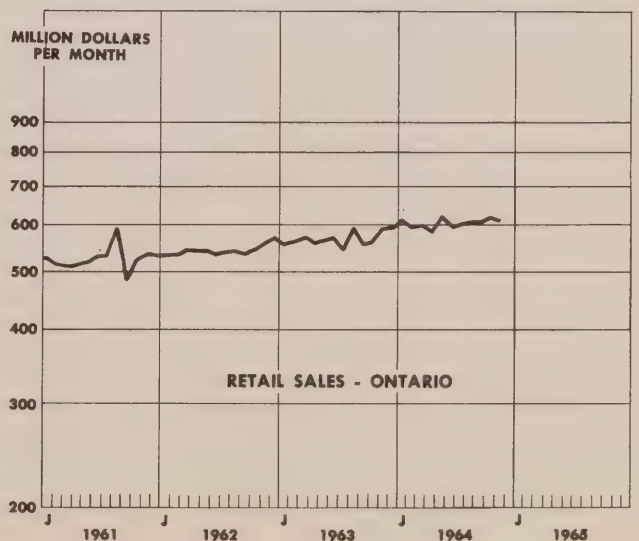
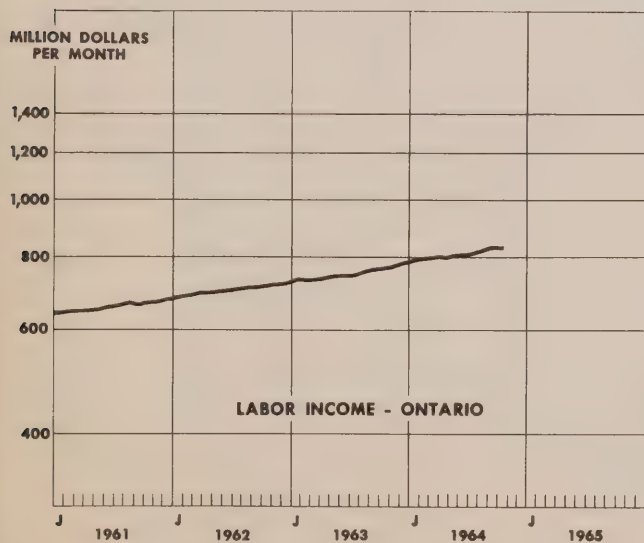
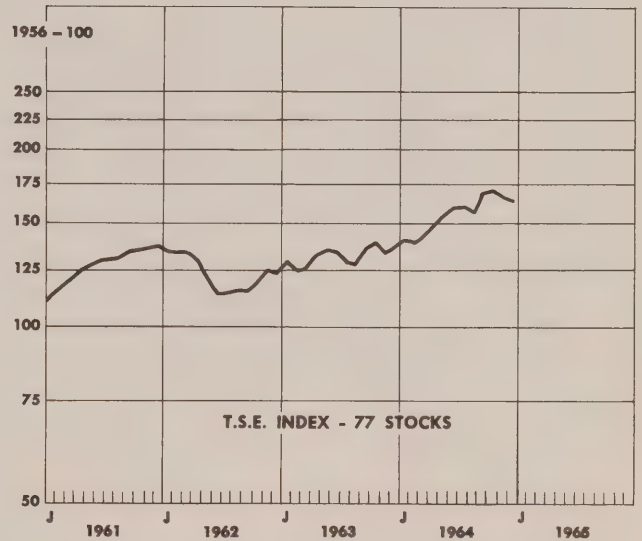
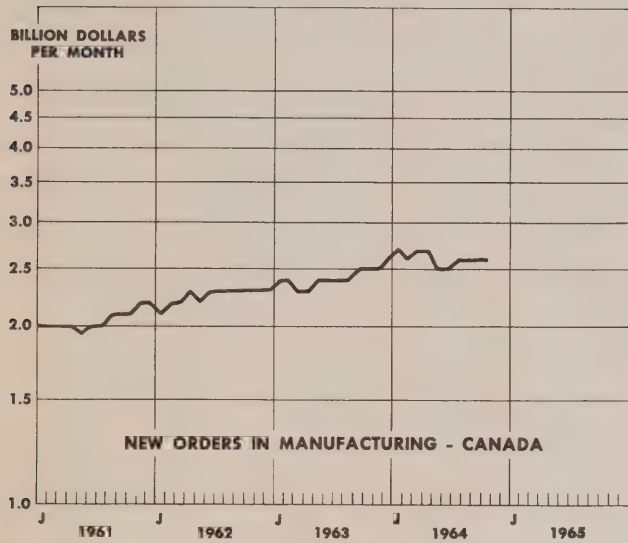
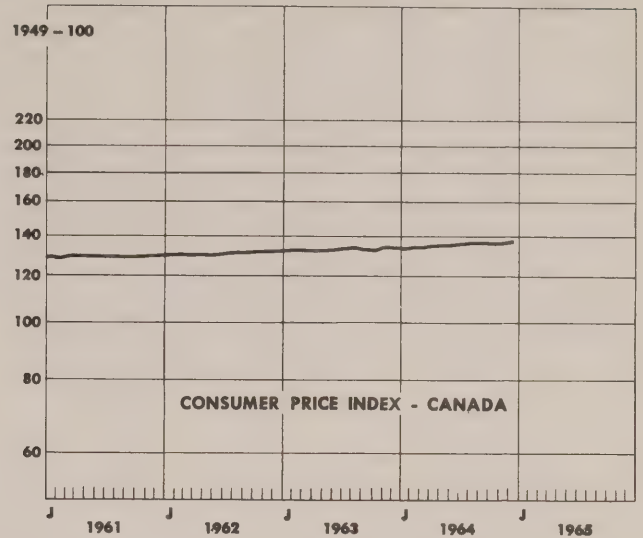
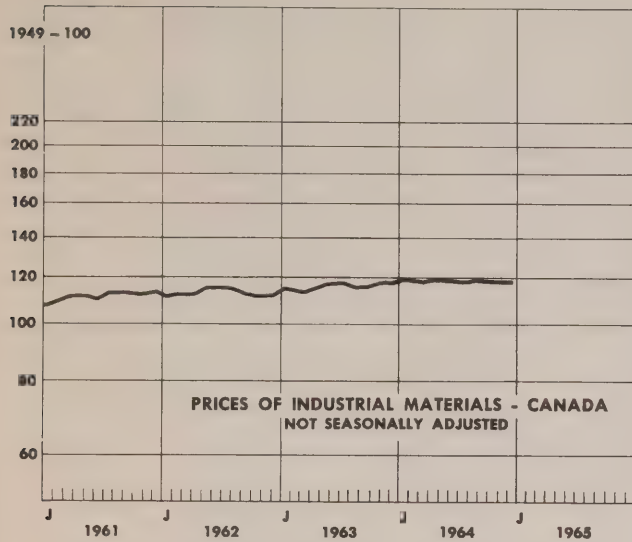
# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED

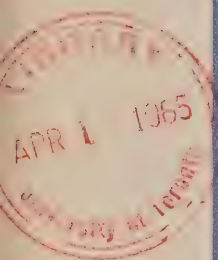


ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED  
(\* Figures for Canada.)

LEADING INDICATORS																
		1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		November	December	January	February	March	April	May	June	July	August	September	October	November	December	
Average Weekly Hours Worked in																
Manufacturing	(No.)	41.5	40.6	41.6	41.4	40.9	41.1	41.3	41.1	40.8	41.1	41.3	97	59	84	
Business Failures - Number		92	103	73	81	61	75	80	102	95	81	77	8,215	2,895	1,801	
Business Failures - Liabilities	\$ 000	5,139	5,194	3,493	1,574	2,194	6,754	11,965	12,832	10,424	2,738	8,578	8,215	2,895	1,801	
New Orders in Manufacturing*	\$ Million	2,501	2,629	2,675	2,559	2,698	2,685	2,506	2,549	2,554	2,591	2,603	2,619	166.0	164.3	
T.S.E. Index - 77 Stocks	1956=100	133.1	136.1	140.5	138.7	143.3	148.6	155.3	158.9	160.5	156.6	169.6	171.2	166.0	164.3	
New Dwelling Unit Starts	(No.)	3,399	5,694	5,470	4,899	3,676	4,136	4,087	4,238	5,213	4,626	4,068	5,303	5,962	75.7	
Housing Contracts	\$ Million	45.4	60.8	94.5	58.8	51.5	80.0	56.9	40.1	57.6	44.9	47.7	51.3	71.7	75.7	
Business, Industrial and Engineering Contracts	\$ Million	112.6	64.9	95.5	78.8	60.1	130.3	104.9	81.5	109.6	97.5	71.8	89.9	93.6	120.3	
Money Supply*	\$ Million	16,522	16,612	16,797	16,758	16,863	17,003	17,095	17,211	17,364	17,430	17,499	17,357	17,502		
COINCIDENTAL AND LAGGING INDICATORS																
Gross National Product*	\$ Million	-	44,332	-	-	45,512	-	-	46,068	-	-	-	46,736	-	-	
Total Industrial Production*	1949=100	203.5	207.7	210.8	212.3	210.2	214.7	209.4	211.3	210.9	214.3	213.4	213.6	190.0	188.4	
Total Manufacturing		180.2	183.5	185.2	188.6	186.3	190.4	185.6	185.7	186.3	191.1	190.0	188.4	184.6	186.6	
Non-Durables		175.9	180.1	179.7	184.2	180.1	185.5	180.9	183.3	181.4	184.9	184.6	186.6	190.6	190.6	
Durables		185.2	187.6	191.6	193.8	193.6	196.1	191.0	188.6	192.1	198.4	196.3	190.6	317.8	317.8	
Mining		305.1	311.8	335.2	324.9	317.3	321.0	321.1	329.5	316.0	313.7	308.1	317.8	426.9	426.9	
Electric Power & Gas Utilities		390.6	403.8	391.2	384.3	396.4	409.3	384.5	403.5	412.2	403.7	416.1	426.9	618	618	
Cheques Cashied in Clearing	\$ Million	3,301	3,278	3,470	3,763	3,754	3,540	3,705	3,749	3,602	3,620	3,891	3,789	2,552	2,558	
Centres	\$ Million	597	599	612	600	603	584	621	602	608	611	610	623	2,479	2,489	
Retail Trade	\$ Million	771	781	790	795	800	798	803	809	814	824	840	833	2,448	2,448	
Labour Income	000's	2,490	2,512	2,490	2,492	2,521	2,513	2,530	2,583	2,582	2,574	2,549	2,549	73	69	
Labour Force	000's	2,403	2,430	2,420	2,435	2,462	2,440	2,442	2,457	2,487	2,488	2,464	2,448	2,969	2,969	
Employed	000's	87	82	70	57	59	73	88	126	95	86	85	101	41.81	41.72	
Unemployed														2,969	2,969	
Unemployed as % of Labour Force	%	3.5	3.3	2.8	2.3	2.3	2.9	3.5	4.9	3.7	3.3	3.3	4.0	2.9	2.7	
Industrial Employment	1949=100	129.2	129.8	130.7	131.5	132.1	131.5	131.4	132.6	131.7	134.0	134.6	133.4	41.29	41.72	
Average Hourly Earnings in Manufacturing	\$	2.09	2.10	2.09	2.09	2.11	2.10	2.11	2.13	2.13	2.16	2.18	2.18	4,160	4,160	
Primary Energy Demand - OEPFC	BKWH	38.34	39.85	38.84	38.97	39.88	41.25	39.33	40.98	41.01	39.79	41.08	41.81	2,969	2,969	
New Dwelling Unit Completions	(No.)	2,879	3,050	2,641	4,495	10,184	6,240	3,454	3,095	4,876	3,798	4,519	4,160	2,969	2,969	
ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED																
Prices, Industrial Materials*	1935-39=100	258.8	257.5	259.5	258.6	257.1	258.8	258.7	257.8	257.3	259.9	258.8	258.9	258.5	257.5	
Domestic Exports*	\$ Million	670.4	638.9	619.0	535.1	583.1	651.4	670.5	774.6	772.4	674.1	725.4	669.9	669.9	669.9	
Imports for Consumption*	\$ Million	623.9	564.8	566.1	512.6	576.6	703.9	657.7	687.6	637.9	563.4	616.9	637.1	637.1	637.1	
Foreign Exchange Reserves*	\$ Million U.S.	2,631	2,595	2,582	2,542	2,466	2,481	2,509	2,534	2,534	2,576	2,625	2,687	2,743	2,674	



# ONTARIO ECONOMIC REVIEW



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DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. Stanley J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*



# THE ONTARIO ECONOMY

Current production, employment and income levels point to a continued high state of prosperity within Ontario. The seasonally adjusted unemployment rate for the province dropped under 2% in January for the first time since 1956. Steel production levels demonstrate the continued requirements of the construction and manufacturing industries. Domestic exports at the end of 1964 were approximately 20% above those of the comparable period in 1963.

## PRODUCTION

Based on 1949=100, the Canadian industrial production index was 219.6 in November seasonally adjusted. This was an increase of 2.5% over the October level and was a record month for the year. The mining index, at 334.2 is slightly below the high for the year set in January, 1964. Manufacturing production showed a 2.7% increase from October with gains of 1.9% and 3.7% for non-durables and durables respectively. The electric power and gas utilities index declined by 1.9% to 418.7 from a record high in October.

Production levels of gold and iron ore increased 6% each from October, followed by increases of 2% and 1% in the production of nickel and copper. Non-metal production increased by over 4% due mostly to increased mining of asbestos. Among the non-durables, the more prominent gains from October were in the production levels of carbonated and brewed products, rubber products and chemicals and allied products. The manufacture of wool goods, products of petroleum and coal, distilled beverages and printed and published material declined slightly from October levels on a seasonally adjusted basis.

Reflecting the high demand from the construction and manufacturing sectors, the Canadian steel industry continued to operate at full capacity. In January, levels of steel ingot and pig iron production were 839 thousand and 601 thousand tons, increases of 19% and 15% respectively from January, 1964. These levels are record highs for the industry.

In January this year 65,848 motor vehicles were produced, consisting of 55,829 cars and 10,019 trucks. This is a decline of 10% from January, 1964 due to a two week strike at the Ford Motor Company and a strike which started January 28th, at the Chrysler plant in Windsor.

## CONSTRUCTION

On a seasonally adjusted basis, Ontario construction contracts awarded for January were valued at \$100.3 million for housing and \$133.1 million for business, industrial and engineering. These figures represent increases of 21% and 15% respectively over December levels and were slightly higher than the increases in the national figures.

In Ontario urban centres of 5,000 and over, there were 2,103 dwelling unit starts in January (unadjusted data). This is a 21% drop from January, 1964 and is partially explained by the earlier start this season in the winter house-building incentive program, as is demonstrated by the fact that there was a 16% increase over January, 1964 in the number of dwelling units under construction.

Ontario construction awards of \$1 million and over totalled \$102.2 million in January. The following table lists some of the larger projects.

LARGE CONSTRUCTION AWARDS  
PLACED RECENTLY IN ONTARIO

<i>Location</i>	<i>Value \$ million</i>	<i>Description</i>
Burlington	2.0	Research Centre
Dundas	2.5	High School
Hamilton	1.1	University Building
Kingston	2.0	University Building
Kitchener	2.0	Plant
London	3.5	Apartments
Milton	1.4	Home for Aged
North York	10.1	Apartments
North York	4.0	Medical Laboratories
Ottawa	2.8	High School
Sault Ste. Marie	1.4	Vocational School
Thessalon	1.4	Home for Aged
Toronto	28.3	Provincial Government Offices
Toronto	6.1	Apartments
Widdifield Twp.	2.5	High School
Windsor	1.5	University Building
Various locations	3.1	Provincial Roadwork



## EMPLOYMENT AND INCOME

Seasonally adjusted, the Ontario labour force numbered 2,566 thousand in January, an increase of 0.3% from December. The numbers employed and unemployed were 2,520 thousand and 46 thousand respectively resulting in a seasonally adjusted unemployment rate of 1.8%.

The provincial labour income for November was \$841 million seasonally adjusted. This was an increase of 0.7% over the October level, corresponding to a similar rise in employment during this period. Average weekly wages and salaries in November were \$90.71 in Ontario and \$87.98 in Canada, showing twelve-month gains of 3.2% and 3.9% respectively. In Ontario the greatest percentage gains were made in the construction and forestry industries, up 9% in each case. Weekly earnings in the manufacturing industry showed a 2% gain which was slightly below the average gain for the industrial composite.

## SALES AND CREDIT

Ontario retail trade for December, 1964 was valued at \$779.1 million, an increase of 6.3% over December, 1963. Sales of lumber and building materials, variety goods and food and beverages showed the greatest gains. In the twelve-month period retail sales were valued at \$7,366.6 million, an increase of 5.6% over 1963. Sales of variety goods, lumber and building materials, and department store goods showed gains of 14%, 13% and 11% respectively.

The national trend was much the same with gains of 5.9% and 6.2% in comparisons of retail trade between 1963 and 1964 for December and for the twelve-month period.

November credit statistics reveal that outstanding credit balances for consumers across the country were approximately 15% higher than in November, 1963. Credit balances of sales finance companies, small loan companies and department stores were 10% to 12% higher. Personal loans from chartered banks were 24% higher for non-secured loans, 16% higher for fully secured loans and showed no change for home improvement loans. It is probable that much of the increase in non-secured personal loans is attributable to car financing, since credit extended for this reason by sales finance companies was only 2% above November, 1963 levels.

## PRICES

The Canadian consumer price index for January, 1965 was 136.9, up 0.1% from the previous month and 2.0% from January, 1964 (1949=100). The monthly change consisted of increases in five components and decreases in the food and clothing components.

The transportation index showed the greatest increase rising from 142.7 in December to 146.3.

This was due mostly to higher automobile insurance rates, small increases in gasoline prices and higher taxi and bus fares in several communities. The recreation and reading index increased 0.3% to a January level of 154.0. Though the recreation component decreased slightly with lower prices for radios and phonograph records, the reading component moved up nearly 2% due to higher newspaper prices.

The housing, health and personal care and tobacco and alcohol indices increased moderately, up 0.1%. Increases in mortgage interest rates were partially offset by decreases in the prices of most major appliances, floor coverings and textiles. Higher prices of toilet soap and cleansing tissues caused the slight increase in the health and personal care component. While tobacco prices remained unchanged from December, beer and liquor prices increased fractionally.

The food index declined 0.5% to a January level of 132.5. Though higher prices were recorded for some fresh vegetables, fats (excluding butter), a few cereal products and selected meat cuts, they were more than offset by declines for oranges, tomatoes, lettuce, steak, turkey and eggs. The clothing index declined 1.5% to 119.2 as a result of January sales of men's, women's and children's wear. Prices of footwear and a few clothing articles including shirts, wool dresses and women's suits rose slightly despite the seasonal sales.

The wholesale price index of 30 industrial materials was 258.2 in January, an increase of 0.8% over that of December, 1964 (1935-39=100). Price increases were experienced for tin, hogs, bleached and unbleached sulphite pulp and raw rubber. Decreases were recorded for raw sugar, beef hides, raw wool and sisal.

The Canadian farm products index increased 1.0% to a January level of 222.5 (1935-39=100), due to a 4.2% increase in the field products index, offset slightly by a 1.1% decline in the animal products index.

## FINANCE

Though the total supply of money in Canada reached a record high of just over \$18 billion early in January, and declined only slightly thereafter, loanable funds on the Canadian money market remained in relatively scarce supply throughout the month. Such seasonal factors as the settling of business accounts and the replenishment of inventories at the commencement of a new year largely prompted this condition. The day-to-day loan rate, which commenced the year at a level of 3½%, rose to 3¾% by mid-January and closed the month at a level of 3¾%.

Price advances were recorded by most outstanding issues traded on Canadian bond markets during January. All sectors shared in this strength despite

a decline in the volume of trading. On average, short and medium term issues registered gains ranging up to 25 cents while long-term issues advanced some 50 cents in price on \$100.00 par value bonds. The market's strength was largely attributable to substantial institutional demand. New Canadian bond financings, over two years in term, for the first month of 1965 totalled \$482.4 million as compared with \$438.4 million in the comparable 1964 period, an increase of 10%. Highlighting the new issues was a \$450 million two-part short and medium termed Government of Canada refunding issue. Among the other new financings was a \$75 million Ontario Hydro-Electric Power Commission offering. This latter issue, carrying a 5¼% coupon with a 20-year maturity date, was priced at \$99.50 to yield 5.29%.

Bullish sentiments prevailed in most sectors of Canadian stock exchanges throughout January. The uptrend in industrial prices was virtually uninterrupted and in the latter half of January new all-time highs were registered across Canada. Representative of this pattern, industrial stocks closed the month at a level of 174.20, an advance on Index of 8.29 points or 5.0% over the month.

Canada's foreign exchange reserves declined US \$6.1 million during January to close the month at a level of US \$2,668.2 million. Seasonal factors largely predicated this small decline in reserves.

The value of the Canadian dollar in terms of US funds fluctuated within a relatively narrow ¼th range throughout January, a range well below that which has prevailed for this period in recent years. At the end of the month, the Canadian dollar was quoted at 92.14 cents.

#### ONTARIO BUDGET 1965-66

On February 10, 1965, the Provincial Treasurer, Hon. J. N. Allan, brought down a record \$1,460 million Ontario Budget (before providing for sinking funds). This represents an increase of \$164 million over 1964-65. Expenditures in most fields are expected to increase over 1964-65, the most noticeable being in the field of education. It is estimated that the combined expenditures of the Departments of Education and University Affairs will total \$509 million or nearly 35% of the total budget. Estimated expenditures for the Departments of Highways (\$329 million), Health (\$162 million), and Public Welfare (\$84 million) are also higher than those for the current fiscal year.

No increases in taxation were proposed in this budget. The forecast of expenditures is expected to exceed revenues by only \$141 million. The fact that the spending program can be substantially increased without recourse to higher taxation or heavy borrowing was cited as being largely attributable to the province's general state of prosperity.

Total provincial revenues are forecast at \$1,319 million for 1965-66. This represents an increase of \$101 million over those for 1964-65. Of this increase, approximately 60% (\$59.8 million) is attributable to personal income tax and reflects not only economic growth but also the improved tax-sharing arrangements. Receipts from taxes on corporations, personal income, retail sales and gasoline account for 89% of the overall growth in revenues.

#### FOREIGN TRADE

According to preliminary figures, Canadian exports in December were up 12% over December, 1963 — a higher increase than had been expected. For the full year 1964, merchandise exports (domestic and re-exports) were valued at \$8,303.9 million, an increase of 19% over the year 1963.

Based on preliminary import figures for December, the merchandise export balance for the year 1964 was in the order of \$812 million, nearly double that of the previous year at \$422 million and the highest since the last four years of the Second World War when special circumstances prevailed.

November exports to the United States, the United Kingdom and the European Common Market were valued at \$391.3 million, \$100.7 million and \$496.3 million, resulting in gains over November, 1963 of 18%, 9% and 16% respectively. At a level of \$34.3 million, exports to Japan were 47% higher than those of November, 1963. Exports to Australia and China were approximately \$14 million each, representing gains of 85% and 49% respectively over November, 1963.

Exports of newsprint paper (\$81.4 million), wheat (\$63.5 million) and wood pulp (\$42.1 million) constituted the three top commodities in November, followed by exports of lumber, iron ore and concentrates and petroleum. Valued at \$106.0 million, exports of inedible end products were 50% above November, 1963.

Import details are available for September, 1964 during which imports from the United States, the United Kingdom and the European Common Market were valued at \$352.2 million, \$38.7 million and \$35.9 million. These levels represented changes of +19%, -3% and +15% from those of September, 1963. September imports from Venezuela and Japan were valued at \$27.8 million and \$15.8 million resulting in gains over September, 1963 of 36% and 30% respectively.

The main commodities imported in September were machinery (non-farm), automobile parts and crude petroleum at levels of \$64.3 million, \$53.9 million and \$31.5 million respectively. Imports of electrical apparatus, engines (except for aircraft) and tractors were valued at \$26.2 million, \$14.8 million and \$13.3 million.



# ONTARIO REGIONAL POPULATION PROJECTIONS 1961 TO 1968

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ONTARIO DEPARTMENT OF ECONOMICS AND DEVELOPMENT

## INTRODUCTION

The projections which appear in the tables were made for use of the various departments of the government of Ontario to be used as a guide in making policy decisions. They are based primarily on 1961 census data and have been made for the economic regions of Ontario for five year intervals. We used one set of assumptions regarding fertility rates and death rates and two assumptions regarding immigration rates. The user will have to decide on the basis of changes in these trends over the projection period which set of assumptions is most useful for his purposes. At the present time fertility rates are increasing, death rates are continuing to decline, particularly in the very young and the older age categories and net migration is bringing an average population increment of about 30,000 per year to Ontario. Circumstances can change very quickly and it is important to keep this in mind when using population projections. We do not pretend to be able to clearly forecast the future. These projections are merely the logical outcome of changes now occurring in the population. They represent our best judgement of current trends and the extension of those trends into the future.

## REGIONAL POPULATION TRENDS

The patterns of population growth within the province are largely dependent on the nature of our economic growth. Early settlement was distributed

over the rich agricultural lands of the province. Recent population growth has been concentrated in the industrial areas, and this concentration is likely to continue. Discoveries of new mineral resources or extension of agriculture into more northerly areas could result in rapid population growth in some of the now scarcely populated parts of the province. Moreover, increasing efforts and incentives toward developing potentially viable industries or commercial activities in the slower growth areas may accelerate growth rates in some of these areas. However, most of these changes cannot be anticipated as to timing, exact location or to degree of acceleration so that we cannot pinpoint them. It is therefore assumed that population accretion in the outlying areas will continue at about the same rate as it has in the past sixty years.

The Metropolitan and Niagara regions have been sharing the bulk of population increase in this province. In 1901 these two regions accounted for 25.4 per cent of Ontario's population and by 1961 their share had increased to 45.7 per cent. In recent years some of the other major cities have been growing very rapidly — Ottawa, London and Sarnia, for example — and some of the industrial concentration may be taken up by these cities. By 1986, however, we expect that about half the Ontario population will be living in the Metropolitan and Niagara regions.

The regional concentration of population is only one part of the growth pattern. The growing urban-

TABLE I  
ONTARIO POPULATION, PERCENTAGE DISTRIBUTION  
BY REGION, 1901-1961

	1901	1911	1921	1931	1941	1951	1956	1961
Eastern Ontario	18.6	16.4	15.0	13.5	13.6	12.9	12.5	12.6
Lake Ontario	10.9	9.1	7.7	6.6	6.2	5.9	5.6	5.4
Metropolitan	16.2	21.0	25.3	28.3	28.4	29.7	31.5	33.5
Niagara	9.2	10.2	11.7	11.7	11.7	12.5	12.6	12.2
Lake Erie	9.8	8.5	7.7	7.0	6.9	6.9	6.7	6.6
Lake St. Clair	7.9	6.9	7.3	8.1	7.9	8.1	8.7	7.2
Upper Grand River	10.1	8.7	7.7	7.1	6.6	6.4	6.1	6.0
Georgian Bay	12.7	10.5	8.5	7.2	6.7	5.9	5.5	5.1
Northeastern Ontario	3.3	5.9	6.3	6.3	7.3	8.0	8.0	8.1
Lakehead-Northwestern Ontario	1.3	2.7	2.8	3.2	3.6	3.6	3.6	3.5
Total Ontario	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Population of Ontario (000's)	2,183	2,527	2,934	3,432	3,788	4,598	5,405	6,236

Source: D.B.S. Census of Canada.



ization of the population gives us striking illustrations of changing concentration. Many of Ontario's rural counties have had fairly stable populations for the past sixty-five years and we do not expect them to change much over the next quarter century. While birth rates in many of these counties are higher than average, the young people move on to the cities or larger towns when they reach working age and the base population remains constant. Thus, there has been almost no change in population in Lanark, Prescott, Russell, Dundas, Glengarry, Grenville, Lennox and Addington, Victoria, Huron, Bruce, Dufferin, Grey or Manitoulin in the twentieth century and in fact several of these counties are more sparsely populated now than they were at the turn of the century. The population in these areas is not expected to grow much in the next twenty-five years and some of them will probably decline as agricultural productivity continues to improve. The young people in these areas must be trained and prepared to move to the more rapidly growing parts of the province where there is greater economic opportunity.

The variation in population growth rates in the various regions of the province has been quite significant. In the period 1956 to 1961, the increase for Ontario was 15.4%. The Georgian Bay region grew by only 6.7%, Lake St. Clair 6.5%, while on the other hand the Metropolitan region increased by 22.8%. The variation in rate of growth in the counties was even more startling with the rate of growth in one district of Manitoulin and one county of Dundas just slightly over 1% for the 5 year period, while Halton county increased by 56.6% during the same period. The following table shows the percentage increases for the 10 major regions in Ontario in the inter-censal periods from 1941 to 1961.

TABLE II  
PERCENTAGE INCREASE IN THE POPULATION  
OF THE ECONOMIC REGIONS IN ONTARIO  
1941-1951, 1951-1956 AND 1956-1961

	Percentage Increase		
	1941-1951	1951-1956	1956-1961
Eastern Ontario	15.0	14.3	15.7
Lake Ontario	15.8	12.2	10.0
Metropolitan	26.6	24.7	22.8
Niagara	29.6	18.4	11.8
Lake Erie	22.8	13.2	12.1
Lake St. Clair	24.8	13.7	6.5
Upper Grand River	17.2	12.3	12.5
Georgian Bay	8.5	9.3	6.7
Northeastern Ontario	16.1	17.0	16.9
Lakehead-			
Northwestern Ontario	21.1	17.3	10.7
Ontario	21.4	17.6	15.4

The variations in the rate of growth over time have affected densities of population within the province. As one would expect, the Northwestern region has the lowest density with only 1.0 person per square mile, followed by the Northeastern region with 4.8 persons per square mile and ranging up to a high of 813.2 per square mile for the Metropolitan region. The variation in counties and districts is from 0.3 persons per square mile in Kenora to almost 2,000 per square mile in York. The varying rates of growth are causing an increase in the spread of population density as can be seen from the table following:

TABLE III  
POPULATION DENSITY, 1941, 1951 AND 1961, FOR  
ONTARIO AND THE ECONOMIC REGIONS

	Density (Population per square mile)		
	1941	1951	1961
Eastern Ontario	50.3	57.8	76.5
Lake Ontario	24.7	28.6	35.3
Metropolitan	419.7	531.1	813.2
Niagara	212.9	276.0	365.4
Lake Erie	77.4	95.0	120.6
Lake St. Clair	108.2	135.0	163.6
Upper Grand River	68.6	80.4	101.6
Georgian Bay	21.9	23.8	27.7
Northeastern Ontario	3.0	3.5	4.8
Lakehead-			
Northwestern Ontario	0.6	0.8	1.0
Ontario	10.4	12.7	17.2

The changes in regional concentration of population have been to a great extent the result of the increased urbanization of our population. As the industrial and commercial sectors of the economy have grown, the population in the major industrial and commercial centres has shown an accompanying growth. At the same time, the increased productivity in the primary industries has resulted in a declining population in the rural areas. Thus, in 1901, only 27% of Ontario's population lived in cities, towns and villages with a population of 5,000 or more. By 1961, only 27% lived outside these cities, towns and villages. This trend toward urbanization is expected to continue. While the concentration in the urban centres is greater than average in the Metropolitan and Niagara regions (94% and 89% respectively), all our regions have shared in the increasing concentration in the cities. Thus Georgian Bay, which in 1961 had only about 26% of its population in urban communities, was still much more urbanized than it had been at the turn of the century when only slightly more than 7% were living in cities and towns.

Table IV shows the proportion of the population of each of the Ontario regions living in cities, towns and villages of 5,000 or more from 1901 to 1961.



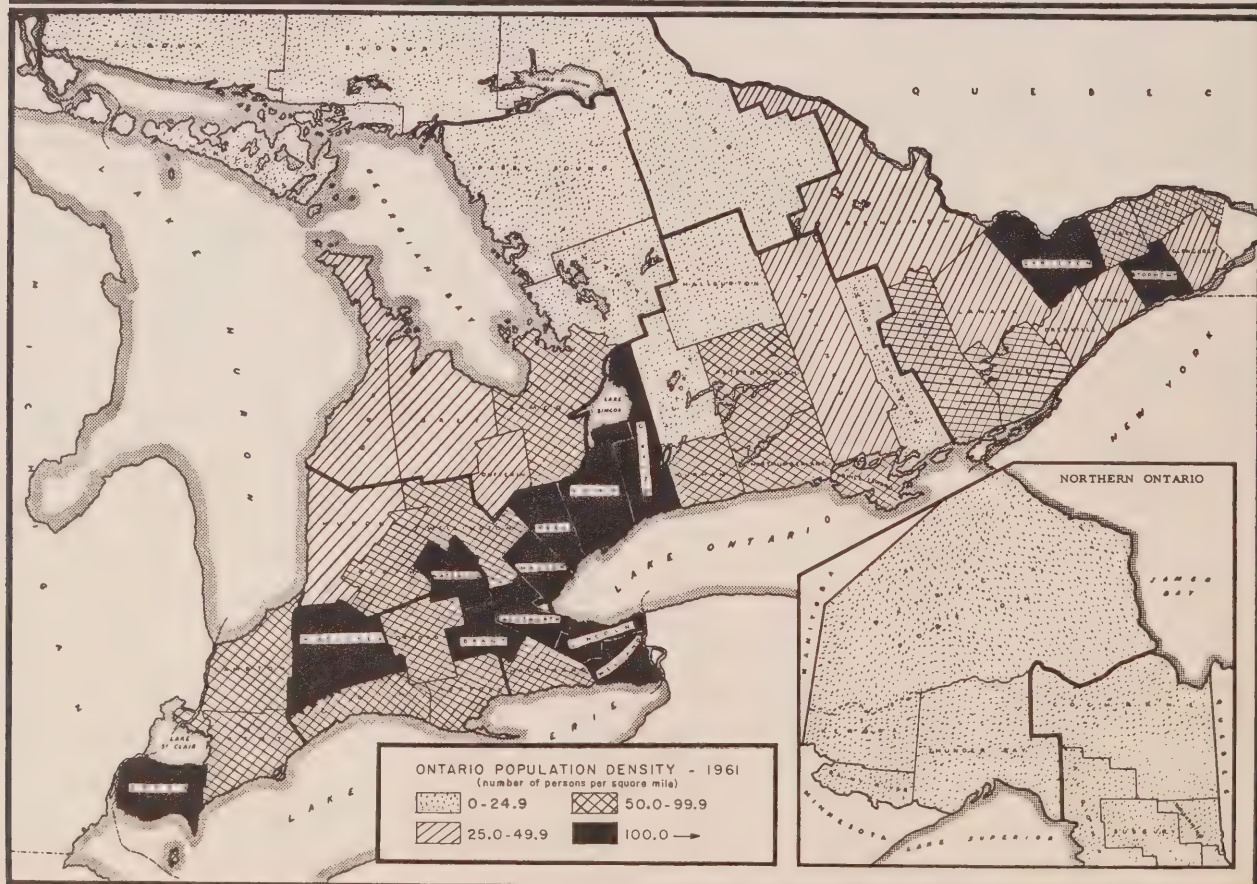
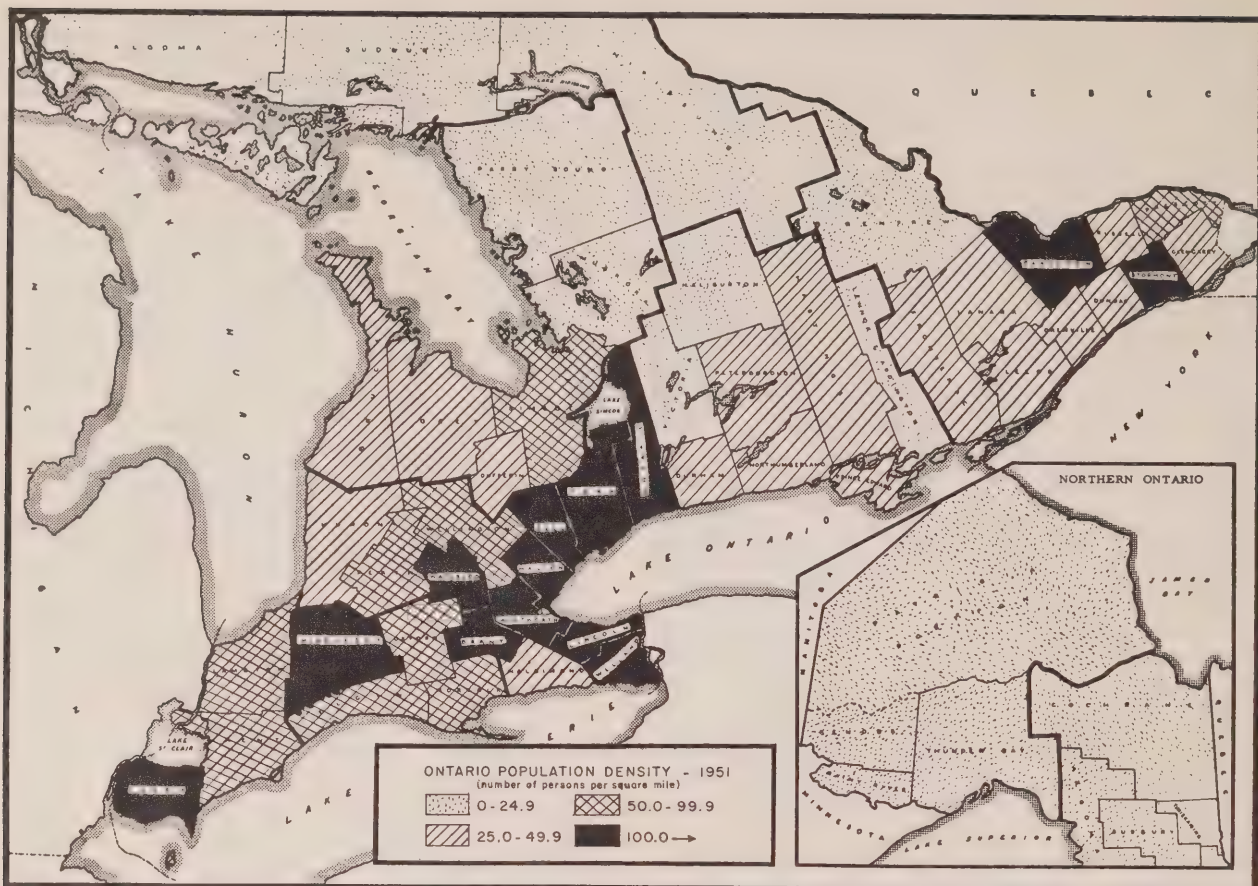


TABLE IV  
URBAN POPULATION, ONTARIO AND THE REGIONS 1901-1961  
POPULATION OF CITIES, TOWNS AND VILLAGES OF 5,000 POPULATION AND OVER  
AS A PERCENTAGE OF TOTAL POPULATION

	1901	1911	1921	1931	1941	1951	1956	1961
Eastern Ontario <sup>(1)</sup>	25.5	32.2	39.2	44.3	48.3	62.0 <sup>(2)</sup>	64.1 <sup>(2)</sup>	68.1 <sup>(2)</sup>
Lake Ontario <sup>(1)</sup>	11.5	19.7	23.1	24.5	29.3	42.0 <sup>(3)</sup>	42.5 <sup>(3)</sup>	44.0 <sup>(3)</sup>
Metropolitan <sup>(1)</sup>	60.5	72.5	71.9	71.0	70.5	93.8 <sup>(4)</sup>	94.3 <sup>(4)</sup>	93.9 <sup>(4)</sup>
Niagara <sup>(1)</sup>	39.4	51.5	54.4	63.9	64.3	82.0 <sup>(5) (6)</sup>	83.5 <sup>(5) (6)</sup>	89.0 <sup>(5) (6)</sup>
Lake Erie <sup>(1)</sup>	27.3	32.3	40.9	44.9	46.0	57.0 <sup>(7)</sup>	59.0 <sup>(7)</sup>	62.1 <sup>(7)</sup>
Lake St. Clair <sup>(1)</sup>	17.0	22.0	31.3	34.6	49.5	64.6 <sup>(8)</sup>	65.2 <sup>(8)</sup>	67.8 <sup>(8)</sup>
Upper Grand River <sup>(1)</sup>	17.8	24.5	35.4	40.1	42.5	52.7 <sup>(9)</sup>	57.3 <sup>(9)</sup>	60.0 <sup>(9)</sup>
Georgian Bay	7.4	12.3	15.9	16.9	20.8	22.3	25.0	25.8
Northeastern Ontario <sup>(1)</sup>	10.0	12.6	21.9	32.3 <sup>(10)</sup>	38.6 <sup>(10)</sup>	50.2 <sup>(10) (11)</sup>	53.6 <sup>(10) (11)</sup>	53.2 <sup>(10) (11)</sup>
Lakehead-Northwestern Ontario <sup>(1)</sup>	42.8	48.8	49.7	53.8	49.9	50.9 <sup>(12)</sup>	50.9 <sup>(12)</sup>	55.1 <sup>(12)</sup>
Ontario Cities, Towns and Villages 5,000 and over as % of Ontario Population	27.1	37.3	44.5	49.2	52.3	51.7	49.6	51.7
Ontario Urban and Metropolitan areas as % of Ontario Population						68.3	70.7	73.2
Total Ontario Population	2,182,947	2,527,292	2,933,662	3,431,683	3,787,655	4,597,542	5,404,933	6,236,092

<sup>(1)</sup> Includes Urban and Metropolitan Areas as defined in 1961 Census of Canada for years 1951, 1956 and 1961.

<sup>(2)</sup> Includes Cornwall c. and Cornwall twp.; Kingston Urban area; Ontario portion of Ottawa-Hull Metropolitan area.

<sup>(3)</sup> Includes Belleville c. with Sidney and Thurlow twps., Peterborough Urban area.

<sup>(4)</sup> Includes Oshawa Urban area, Toronto Metropolitan area, Brampton c. and Chinguacousy.

<sup>(5)</sup> Previous to 1951, Burlington was shown in Metropolitan region only, but according to 1961 Census of Canada it is included in Hamilton Metropolitan area: for consistency in this table the Metropolitan population is included under the Niagara region as follows: 1951 — 6,017; 1956 — 9,127; 1961 — 36,352.

<sup>(6)</sup> Includes Brantford Urban area, Hamilton Metropolitan area, St. Catharines Urban area.

<sup>(7)</sup> Includes London Metropolitan area.

<sup>(8)</sup> Includes Sarnia Urban area, Windsor Metropolitan area.

<sup>(9)</sup> Includes Guelph Urban area, Kitchener Metropolitan area.

<sup>(10)</sup> Includes Teck Township.

<sup>(11)</sup> Includes Sault Ste. Marie Urban area, Sudbury Metropolitan area, Timmins Urban area.

<sup>(12)</sup> Includes Fort William-Port Arthur Urban area.

Source: D.B.S. Census of Canada, 1961.

Population changes are the result of both natural increase and migration. The trends in each of the factors affecting the total population, i.e. fertility rates, age specific mortality rates, population age distribution and immigration from abroad and from other provinces and areas as well as emigration, affect the age and sex distribution of the population. On the other hand, the age and sex distribution of the population also affect crude birth and death rates (rates per 1,000 population).

Natural increase rates are determined partially by the age specific fertility rates and age specific mortality rates and partially by the age distribution of the population of the area under study<sup>(1)</sup>. Fertility

rates in the main child-bearing age groups show less relative variation from region to region than do those at the younger child-bearing ages and in the older child-bearing ages. Thus for the 20-24 year olds, the lowest fertility rates in 1961 were 212 per 1,000 females in this age category in the Metropolitan region and the highest rate was 297 per 1,000 females in the Northeastern region. In the 15-19 year age category, fertility rates varied from 60.3 per 1,000 females in Eastern Ontario to 99.2 per 1,000 females in the Lakehead region. In the older child-bearing ages, 40-44, there was again a fairly large variation in fertility rates from a low of 17.4 per 1,000 females in the Metropolitan region to 33.3 births per thousand females in the Northeastern Ontario region.

<sup>(1)</sup> See Table VIII for regional fertility and mortality rates in 1961.



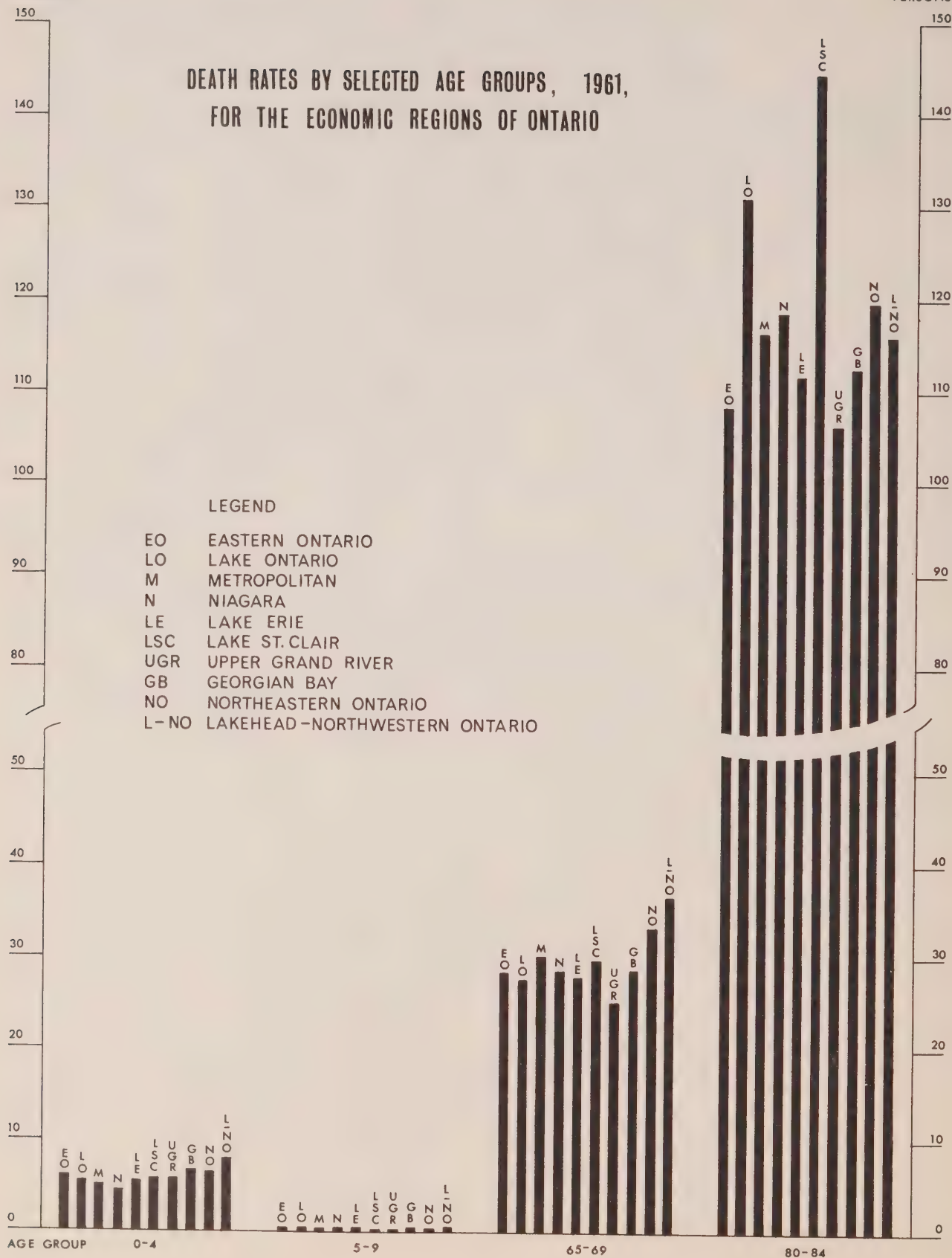
DEATHS  
PER  
THOUSAND  
PERSONS

DEATHS  
PER  
THOUSAND  
PERSONS

# DEATH RATES BY SELECTED AGE GROUPS, 1961, FOR THE ECONOMIC REGIONS OF ONTARIO

## LEGEND

EO EASTERN ONTARIO  
LO LAKE ONTARIO  
M METROPOLITAN  
N NIAGARA  
LE LAKE ERIE  
LSC LAKE ST. CLAIR  
UGR UPPER GRAND RIVER  
GB GEORGIAN BAY  
NO NORTHEASTERN ONTARIO  
L-NO LAKEHEAD-NORTHWESTERN ONTARIO



Death rates show the greatest regional variation among the very young. This is understandable because of the great variation in availability of pre-natal care, maternity care and specialized child care in different parts of the province. Thus, death rates for the 0-4 year olds varied from a low of 4.5 per 1,000 population in the Niagara region to a high of 8.0 per 1,000 in the Lakehead region in 1961. On the other hand, the variation for those 85 years of age and over was much less, from a low of 178.5 in the Lakehead region to a high of 222.7 per 1,000 population in Lake Ontario. The death rate chart illustrates the difference in age specific death rates in the regions for a selected group of ages.

gained from population movements quite consistently over the past twenty years, the Georgian Bay region has gained during some periods of expansion and lost population during slower periods. It has, however, retained more than the Ontario average proportion of school age children.

TABLE V  
PERCENTAGE DISTRIBUTION OF POPULATION BY AGE GROUP  
FOR ONTARIO AND THE ECONOMIC REGIONS, 1961

Demographic trends have some effect on the population growth of the regions. However, of greater significance is the relative economic opportunity in the various regions. It is therefore likely that the industrial regions will continue to gain population from the rural areas and that the age distributions in the regions will reflect these movements. A larger proportion of the working age population will be located in the urban centres than in the rural areas. Education and training programs even in the more slowly growing areas, therefore, must be designed in part to fit people for work in the industrial areas.

The major factor in relative growth rates of the total population is migration. In the past twenty years Ontario has gained nearly one million persons through exchange of population with other areas. About three-fifths of that gain accrued to the Metropolitan region and another 14 per cent went to the Niagara region. It is anticipated that the trend toward continued industrialization will retain the attraction of the industrial centres for new immigrants.

The following table shows net gains through migration in the ten regions for the inter-census periods from 1941 to 1961.

TABLE VI  
NET MIGRATION FOR ONTARIO BY ECONOMIC REGIONS 1941-1961

<i>Region</i>	<i>1941-51</i>	<i>1951-56</i>	<i>1956-61</i>
Eastern Ontario .....	-847	30,304	41,640
Lake Ontario .....	7,403	9,956	5,749
Metropolitan .....	167,348	215,231	215,496
Niagara .....	65,578	49,575	19,599
Lake Erie .....	30,092	17,348	14,670
Lake St. Clair .....	26,128	13,466	-11,625
Upper Grand River .....	13,707	11,242	13,903
Georgian Bay .....	-7,217	5,393	-476
Northeastern Ontario .....	-18,095	13,289	12,398
Lakehead-Northwestern Ontario .....	5,296	10,252	-790
Ontario .....	289,393	376,056	310,564

#### REGIONAL POPULATION PROJECTIONS

Projections of the population of Ontario were made on the basis of assumptions of trends now evident in the population continuing into the future. The regions were expected to retain their differential growth rates, but in some instances where changes in trends are becoming evident, we have assumed that there may be some change in the pattern. For example, there has been some evidence of an upturn in activity in the southern part of the Georgian Bay region as the Metropolitan expansion appears to be moving up into this area. We have, therefore, projected some net gain in population for this region over the next twenty-five years.

The projections are for the most part merely continuations of past trends and should not be looked upon as forecasts. They indicate the nature and type of change which can be expected if there are no strong changes in trend.

Table VII shows the population of Ontario and the regions in 1961 and projections to 1986, under two sets of assumptions regarding net immigration.

Readers who may be interested in greater detail should write to the Department of Economics and Development to obtain a copy of the report "Ontario Population and Labour Force Projections", for the economic regions of Ontario, 1961-1986.



TABLE VII

POPULATION PROJECTIONS, 1966-1986, FOR ONTARIO AND THE ECONOMIC REGIONS  
BASED ON THE 1961 CENSUS POPULATIONASSUMPTION A: Net Migration to Ontario 10,000 per annum  
Net Internal Migration 2,000 per annum

<i>Region</i>	<i>Census 1961</i>	<i>Projections</i>				
		<i>1966</i>	<i>1971</i>	<i>1976</i>	<i>1981</i>	<i>1986</i>
Eastern Ontario	782,531	858,900	945,700	1,049,700	1,171,300	1,308,700
Lake Ontario	335,063	363,000	397,400	442,400	496,000	555,900
Metropolitan	2,087,545	2,308,600	2,516,500	2,752,800	3,034,200	3,360,600
Niagara	762,288	830,600	907,700	1,001,800	1,112,700	1,236,200
Lake Erie	405,258	444,000	488,200	540,400	600,800	671,500
Lake St. Clair	449,776	489,600	539,200	600,900	675,100	759,600
Upper Grand River	372,713	405,600	444,600	492,300	548,500	612,700
Georgian Bay	318,744	342,100	374,100	415,000	462,700	515,800
Northeastern Ontario	505,651	570,900	645,800	736,800	846,500	975,500
Lakehead- Northwestern Ontario	216,523	240,300	268,300	302,600	343,800	391,300
Total Ontario	6,236,092	6,853,600	7,527,500	8,334,700	9,291,600	10,387,800

ASSUMPTION B: Net Migration to Ontario 30,000 per annum  
Net Internal Migration 6,000 per annum

<i>Region</i>	<i>Census 1961</i>	<i>Projections</i>				
		<i>1966</i>	<i>1971</i>	<i>1976</i>	<i>1981</i>	<i>1986</i>
Eastern Ontario	782,531	866,800	963,100	1,077,600	1,211,600	1,360,700
Lake Ontario	335,063	365,300	402,900	451,100	508,600	572,300
Metropolitan	2,087,545	2,374,100	2,658,400	2,981,700	3,362,300	3,786,600
Niagara	762,288	845,700	940,700	1,054,700	1,188,400	1,334,500
Lake Erie	405,258	450,200	501,800	562,000	631,900	711,900
Lake St. Clair	449,776	495,700	552,000	621,300	704,500	797,800
Upper Grand River	372,713	411,000	456,200	510,600	574,600	647,000
Georgian Bay	318,744	344,700	379,100	423,300	474,000	530,500
Northeastern Ontario	505,651	576,800	658,100	756,900	875,300	1,012,900
Lakehead- Northwestern Ontario	216,523	243,400	275,200	314,000	360,100	412,500
Total Ontario	6,236,092	6,973,700	7,787,500	8,753,200	9,891,300	11,166,700

## ASSUMPTIONS

The two sets of projections shown in the preceding tables are based on a single set of assumptions regarding fertility and mortality rates for the province, and a single set for each of the regions. The difference between the projections A and B are entirely the result of differences in the assumptions regarding migration.

Differences in living conditions, availability of hospital and medical care and differences in modes of living, result in fairly substantial differences in both age specific fertility and age specific death rates in the different regions of the province. However, we assumed that the trends toward longer life expectancy and the trends in birth rates are affecting all the regions to some extent.

Long term trends in age specific fertility rates in the province were projected to 1986. Because of the limitation of information on age specific fertility rates for the regions, the regional fertility rates were based on the 1961 rates with the provincial trend projected. Age specific death rates for the province were also based on the long term trends for each 5 year age category. Again, the regional 1961 rates were projected on the same trend as that shown for the provincial total to 1986.

Immigration has been the most volatile factor in population growth in Ontario in the past, and is the most difficult to project. The long term average net gain through population movements has been 30,000 per year, and this we consider to be the most probable future long term projection. However, a sharp cutback in immigration in 1960 and 1961, and the lack of incentive of Europeans to come to Canada, made the short-term outlook rather more restrictive. We have, therefore, made projections based on an average net gain through population movements of 10,000 per year to the province. Internal migration also affects the population of the regions and while there is a fairly substantial interchange of population within the province, the net results have been slightly lower than the results of immigration from abroad, or from other provinces. The net gains through migration were distributed among the regions on the basis of the gains or losses to these regions in the periods 1931 to 1961.

*Births:* Continuing rising fertility rates in the 20 to 29 age category and stable rates for women under 20 and over 30 years of age.

*Deaths:* Declining death rates in most age categories but more rapid rates of decline in infant deaths and in the over 65 age categories.

*Immigration:* Net gains both from outside Canada and from other provinces averaging about 30,000 persons per year. Changes in immigration policy, consistently high employment levels and improvements in economic opportunity in the province could quickly change this picture, but for the present we will assume that migration will continue at about the long term average and we can expect the net gain through population movements to average 30,000 per year.

*Inter-County Migration:* Average net change between Ontario counties of 6,000 per year. This means that those counties which gain have a net gain of 6,000 per year from movement between counties and those who are losers have a net loss of 6,000 per year from inter-county movements.

TABLE VIII

BIRTHS PER THOUSAND FEMALES, BY FIVE YEAR AGE GROUP  
ONTARIO AND THE REGIONS 1961

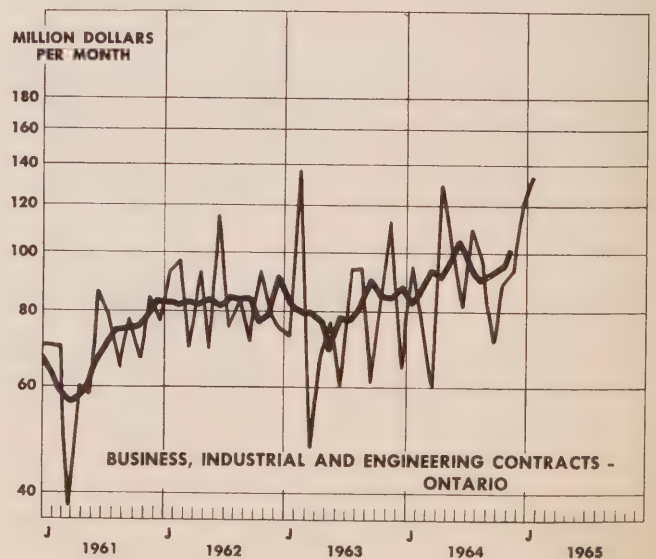
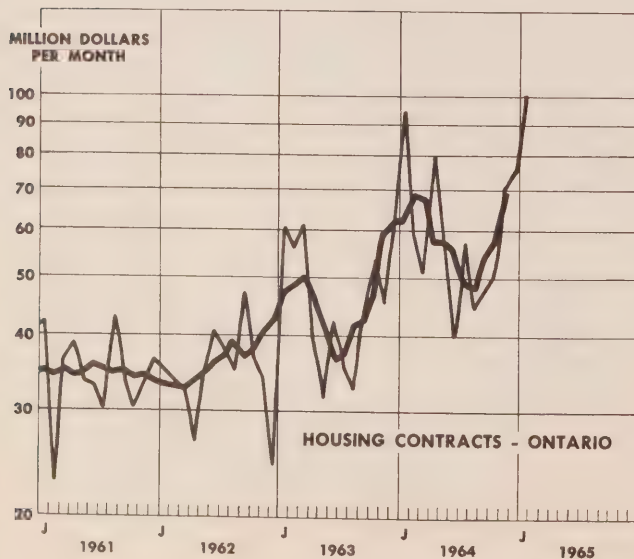
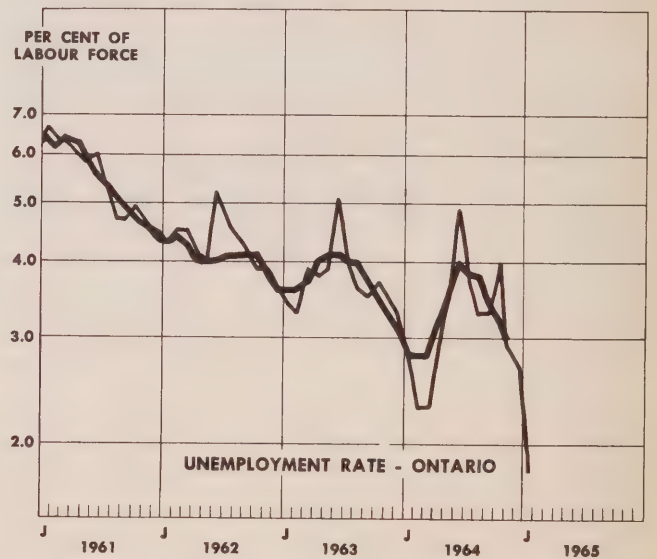
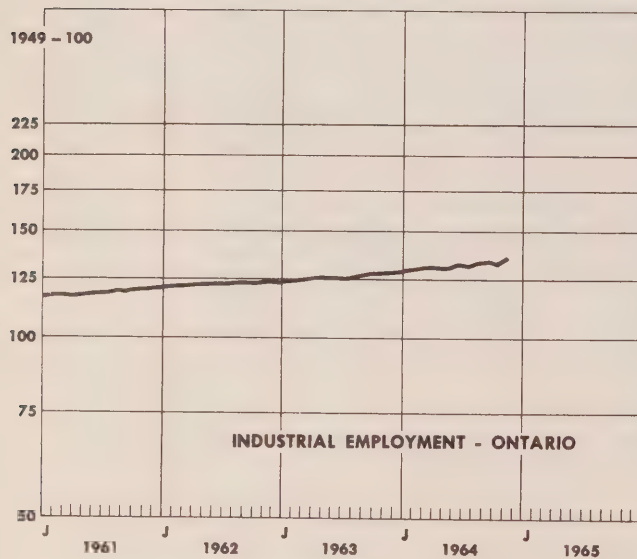
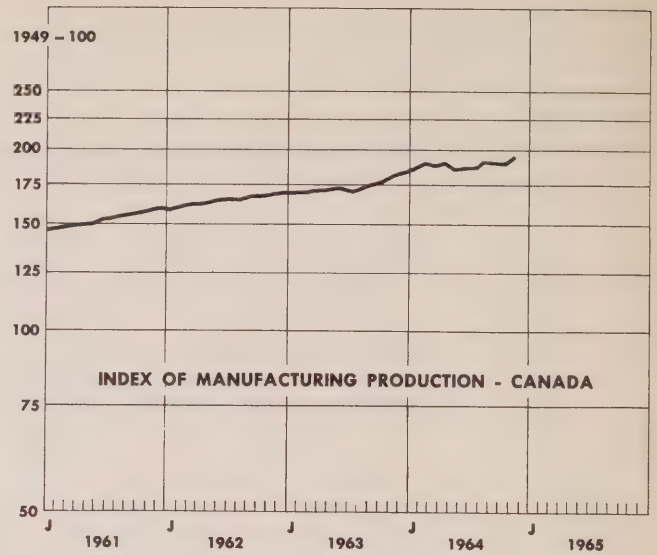
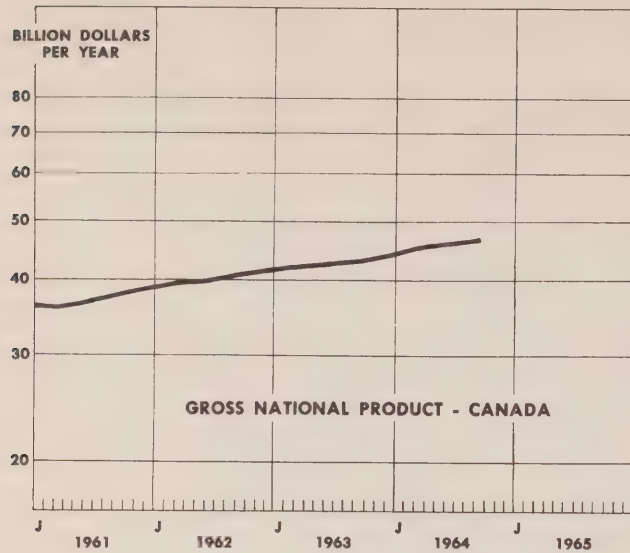
<i>Economic Regions</i>	15-19	20-24	25-29	30-34	35-39	40-44	45-49	<i>Total</i>
Eastern Ontario .....	60.3	240.1	222.0	142.8	76.2	24.9	1.8	109.7
Lake Ontario .....	70.0	269.2	222.4	137.4	72.7	23.2	1.6	110.3
Metropolitan .....	68.1	212.3	197.8	126.5	62.3	17.4	1.6	101.6
Niagara .....	64.0	228.6	203.7	125.6	62.7	18.0	1.5	99.6
Lake Erie .....	74.2	238.3	209.6	124.0	65.0	20.3	1.3	105.1
Lake St. Clair .....	64.5	260.9	219.4	137.5	77.2	24.0	2.2	111.3
Upper Grand River .....	62.9	243.1	215.3	140.1	73.5	26.5	1.2	108.1
Georgian Bay .....	73.3	276.0	220.1	139.0	78.8	27.1	2.8	110.5
Northeastern Ontario .....	85.9	297.0	243.6	160.3	91.2	33.3	2.0	138.4
Northwestern Ontario .....	99.2	289.9	233.6	155.8	83.1	29.1	4.6	128.6
Ontario .....	69.5	239.8	211.3	134.0	69.8	21.9	1.8	108.2

DEATHS PER THOUSAND POPULATION, BY FIVE YEAR AGE GROUP  
ONTARIO AND THE REGIONS 1961

<i>Economic Regions</i>	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	<i>Total</i>
Eastern Ontario .....	6.1	0.5	0.5	1.0	1.0	1.1	0.9	2.0	2.6	4.4	8.2	11.9	19.5	28.2	45.4	73.0	108.3	198.1	8.2
Lake Ontario .....	5.6	0.5	0.6	1.2	1.6	1.0	1.8	2.1	2.8	5.5	7.8	12.1	17.4	27.4	39.9	76.4	130.9	222.7	9.8
Metropolitan .....	5.1	0.4	0.3	0.6	0.8	0.8	0.9	1.6	2.4	4.7	7.7	12.1	19.1	30.1	45.7	72.7	116.4	199.7	7.8
Niagara .....	4.5	0.5	0.4	0.5	0.9	0.9	1.1	1.5	2.5	4.3	7.0	12.6	17.9	28.3	45.8	75.3	118.6	198.6	8.0
Lake Erie .....	5.6	0.5	0.6	1.1	0.9	1.1	1.1	2.2	2.7	4.8	7.9	12.2	18.0	27.7	42.5	72.2	111.7	201.8	9.2
Lake St. Clair .....	5.8	0.4	0.4	0.9	1.3	1.1	1.3	1.8	2.4	5.1	7.8	11.5	17.0	29.7	50.2	73.6	144.6	198.0	8.4
Upper Grand River .....	5.8	0.4	0.2	0.7	0.8	0.9	0.9	1.0	2.5	4.8	6.9	11.0	17.8	25.0	43.2	66.0	106.5	203.3	8.6
Georgian Bay .....	6.7	0.7	0.6	0.8	1.8	1.5	1.3	2.1	3.1	4.9	7.3	10.2	18.4	28.5	41.5	64.2	112.5	206.3	10.1
Northeastern Ontario .....	6.5	0.6	0.6	1.0	1.5	1.3	1.6	2.3	3.0	5.7	9.4	14.9	22.4	33.2	53.7	78.2	119.7	217.9	6.7
Northwestern Ontario .....	8.0	0.7	0.4	0.7	1.2	1.8	2.0	1.8	3.7	4.2	8.2	12.4	23.3	36.5	44.1	71.1	116.0	178.5	7.6
Ontario .....	5.6	0.5	0.4	0.8	1.0	1.0	1.1	1.8	2.6	4.8	7.8	12.1	18.9	29.2	45.3	72.5	115.1	202.1	8.2



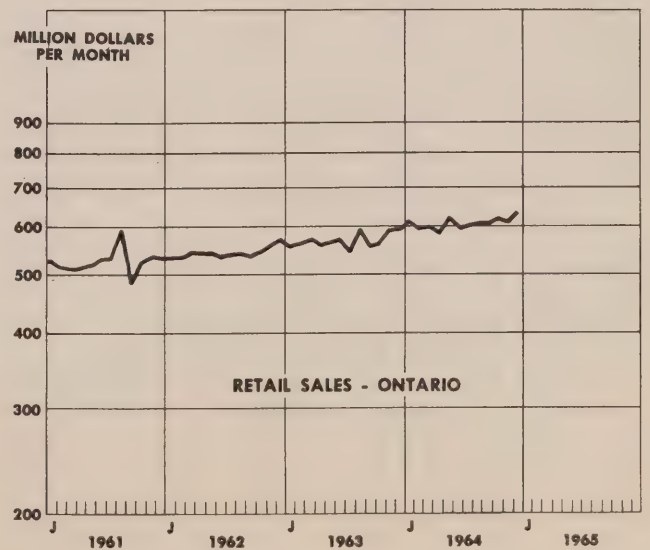
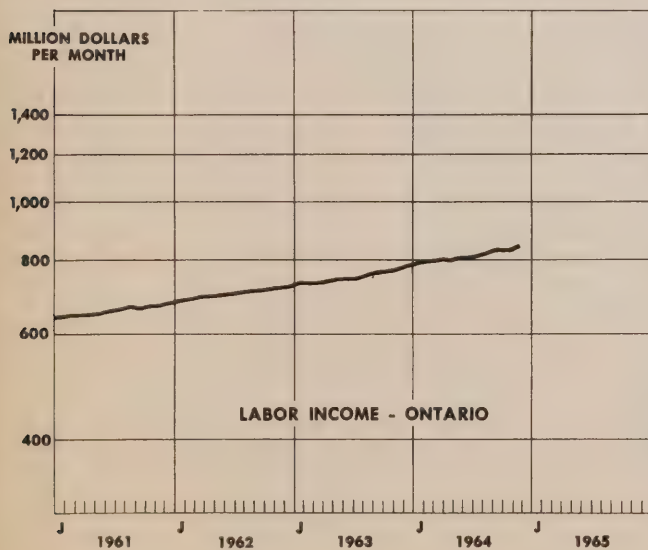
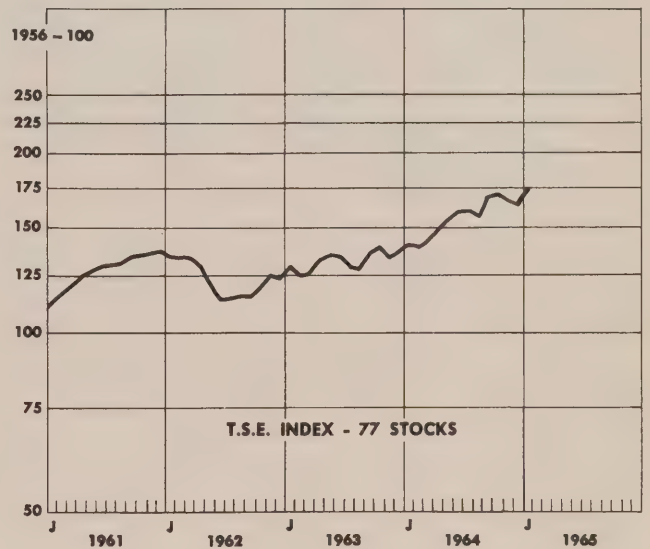
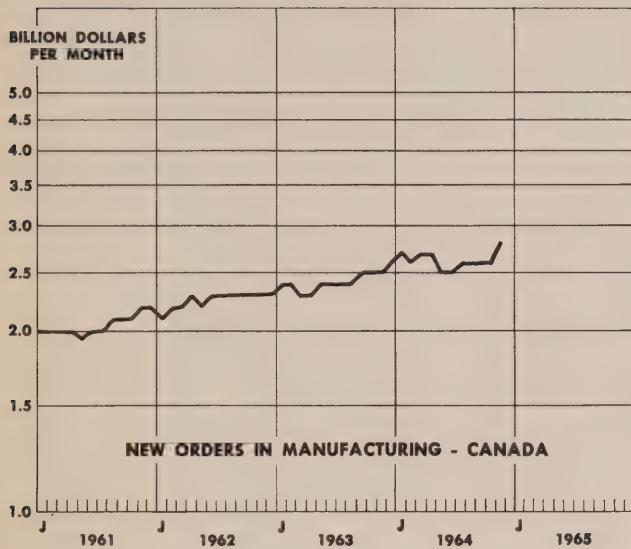
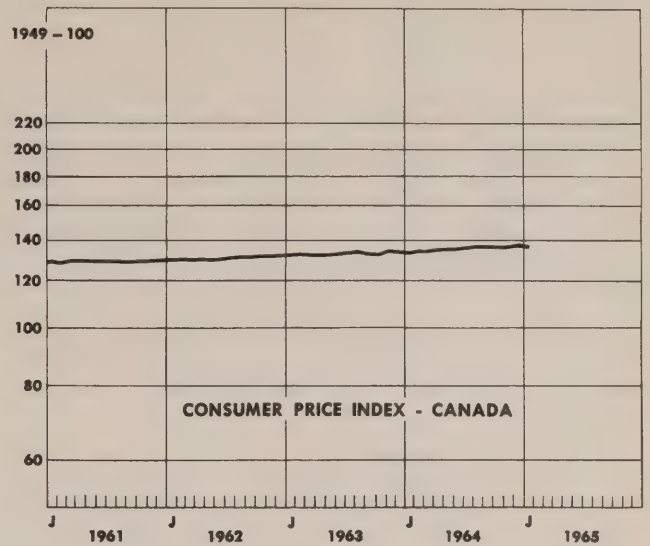
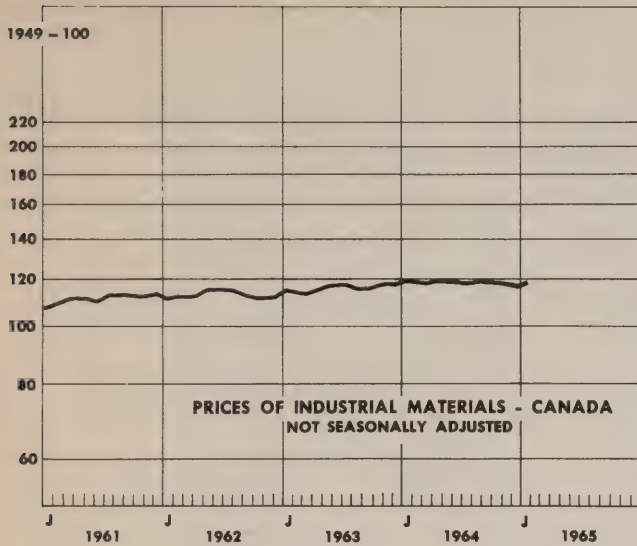
# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED  
(\* Figures for Canada)

LEADING INDICATORS

	1963	1964	December	January	February	March	April	May	June	July	August	September	October	November	December	1965
Average Weekly Hours Worked in Manufacturing	40.6	41.6	41.4	40.9	41.1	41.3	41.1	40.8	41.1	41.3	41.1	41.3	41.1	41.1	41.1	1965
Business Failures - Number	103	73	81	61	75	80	102	95	81	77	97	81	97	59	84	93
Business Failures - Liabilities	5,194	3,493	1,574	2,194	6,754	11,965	12,832	10,424	2,738	8,578	8,215	2,738	8,215	2,895	1,801	3,006
New Orders in Manufacturing*	2,629	2,675	2,559	2,698	2,685	2,506	2,549	2,554	2,591	2,603	2,623	2,591	2,623	2,775	2,775	173.3
T.S.E. Index - 77 Stocks	136.1	140.5	138.7	143.3	148.6	155.3	158.9	160.5	156.6	169.6	171.2	169.6	171.2	166.0	164.2	173.3
New Dwelling Unit Starts	5,694	5,470	4,899	3,676	4,136	4,087	4,238	5,213	4,626	4,068	5,303	4,626	5,303	5,962	5,559	100.3
Housing Contracts	60.8	94.5	58.8	51.5	80.0	56.9	40.1	57.6	44.9	47.7	51.3	47.7	51.3	71.7	75.7	100.3
Business, Industrial and Engineering Contracts	64.9	95.5	78.8	60.1	130.3	104.9	81.5	109.6	97.5	71.8	89.9	97.5	89.9	93.6	120.3	133.1
Money Supply*	16,612	16,747	16,758	16,863	16,986	17,095	17,176	17,346	17,448	17,517	17,391	17,448	17,391	17,502	17,610	17,855

COINCIDENTAL AND LAGGING INDICATORS

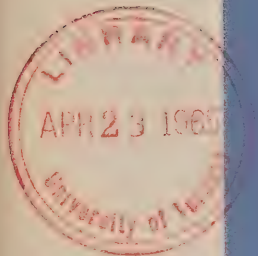
Gross National Product*	44,332	-	-	45,512	-	-	46,068	-	-	-	-	46,736	-	-	-	-
Total Industrial Production*	207.7	210.8	212.3	210.2	214.7	209.4	211.3	210.9	214.3	213.5	214.2	213.5	214.2	219.6	219.6	219.6
Total Manufacturing	183.5	185.2	188.6	186.3	190.4	185.6	185.7	186.3	191.1	190.1	188.9	191.1	188.9	194.0	194.0	194.0
Non-Durables	180.1	179.7	184.2	180.1	185.5	180.9	183.3	181.4	184.9	184.7	186.6	184.7	186.6	190.1	190.1	190.1
Durables	187.6	191.6	193.8	193.6	196.1	191.0	188.6	192.1	198.4	196.4	191.5	198.4	191.5	198.6	198.6	198.6
Mining	311.8	335.2	324.9	317.3	321.0	321.1	329.5	316.0	313.7	308.1	319.9	313.7	308.1	334.2	334.2	334.2
Electric Power & Gas Utilities	403.8	391.2	384.3	396.4	409.3	384.5	403.5	412.2	403.7	416.1	426.9	416.1	426.9	418.7	418.7	418.7
Cheques Cashied in Clearing	3,278	3,470	3,763	3,754	3,540	3,705	3,749	3,602	3,620	3,891	3,789	3,620	3,789	3,600	3,635	3,635
Centres	599	612	600	603	584	621	602	608	611	610	623	611	623	618	618	618
Retail Trade	781	790	795	800	798	803	809	814	824	840	835	824	835	841	841	841
Labour Income	2,512	2,490	2,492	2,521	2,513	2,530	2,583	2,582	2,574	2,549	2,549	2,574	2,549	2,552	2,552	2,552
Labour Force	2,430	2,420	2,435	2,462	2,440	2,442	2,457	2,487	2,488	2,464	2,448	2,488	2,448	2,479	2,489	2,520
Employed	82	70	57	59	73	88	126	95	86	85	101	85	101	73	69	46
Unemployed	3.3	2.8	2.3	2.3	2.9	3.5	4.9	3.7	3.3	3.3	4.0	3.3	4.0	2.9	2.7	1.8
Unemployed as % of Labour Force	129.8	130.7	131.5	132.1	131.5	131.4	132.6	131.7	134.0	134.6	133.4	134.6	133.4	136.3	136.3	136.3
Industrial Employment	2.10	2.09	2.09	2.11	2.10	2.11	2.13	2.13	2.16	2.18	2.15	2.16	2.15	2.15	2.15	2.15
Average Hourly Earnings in Manufacturing	39.85	38.84	38.97	39.88	41.25	39.33	40.98	41.01	39.79	41.08	41.81	39.79	41.81	41.29	41.72	42.13
Primary Energy Demand - ORPC	3,050	2,641	4,495	10,184	6,240	3,454	3,095	4,876	3,798	4,519	4,160	3,798	4,160	2,969	3,013	3,013
New Dwelling Unit Completions																

ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED

Prices, Industrial Materials*	1935-39=100	257.5	258.6	257.1	258.8	258.7	257.8	257.3	259.9	258.8	258.9	258.5	258.9	258.5	256.2	258.2
Domestic Exports*	\$ Million	638.9	535.1	583.1	651.4	670.5	774.6	772.4	674.1	725.4	669.9	706.6	669.9	706.6	732.5	732.5
Imports for Consumption*	\$ Million	556.8	565.9	512.4	704.0	657.7	687.6	637.9	566.2	616.9	637.1	674.6	637.1	674.6	2,674	2,668
Foreign Exchange Reserves*	\$ Million U.S.	2,595	2,582	2,542	2,466	2,509	2,534	2,534	2,576	2,625	2,687	2,743	2,687	2,743	2,674	2,668



# ONTARIO ECONOMIC REVIEW



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DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. Stanley J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*



# THE ONTARIO ECONOMY

The high level of employment in Ontario continued to reflect favourable conditions within the province. Unadjusted data indicate that the unemployment rate for February was 3.7%. After a particularly high January level, construction awards have returned to a more normal trend. This pattern was also evident in the case of steel production. Domestic exports during January were 7% below that of the previous January after high levels (\$714 million) in December, 1964.

## PRODUCTION

Seasonally adjusted, the Canadian industrial production index for December was 221.5, based on 1949=100. This represented a gain of 0.8% over November and was due to increases of 5.5% and 1.8% in the indices of electric power and gas utilities and non-durable manufactures, and decreases of 1.2% and 0.9% in mining production and durable manufactures.

Steel production in February showed a decline from record levels in January. During the first two months, steel ingot and pig iron production levels were 11.1% and 8.1% above the comparable period in 1964. However, production in February was 746 thousand tons of steel ingots and 514 thousand tons of pig iron representing increases of 6.3% and 0.7% over the previous February.

In February, the production of motor vehicles number 64,073 units including 10,600 trucks and 53,473 cars. Despite no production at the strike-bound Chrysler plants, vehicle output declined only 1.5% from February 1964.

## CONSTRUCTION

After an unusually high level in January (\$100.3 million), Ontario housing contracts declined in February to \$49.2 million seasonally adjusted. Consequently, housing contracts for the first two months showed virtually no change from the same period in 1964. Seasonally adjusted business, industrial and engineering contracts in February were valued at \$76.8 million, a decline of over \$55 million from January.

Ontario construction awards valued at \$1 million and over totalled approximately \$45 million in February, a decline of over 50% from January. A list of the larger projects appears in the table below:

LARGE CONSTRUCTION AWARDS  
PLACED RECENTLY IN ONTARIO

<i>Location</i>	<i>\$ million</i>	<i>Description</i>
Cornwall	1.6	Addition to pulp and paper mill
Fort William	2.0	Shopping plaza
Gloucester Twp.	2.0	Home for the aged
Guelph	2.1	University residence
London	1.4	School addition
North York Twp.	1.2	Arena and stadium
North York Twp.	4.2	Apartments and town houses
Oakville	5.0	Truck assembly plant
Ottawa	1.2	Virus laboratory addition
Ottawa	1.2	Site preparation for performing arts centre
Pickering	1.8	High school addition
St. Catharines	1.0	Apartment building
Toronto	3.5	Office building
Toronto	1.4	Subway
Vineland	1.4	Agricultural research laboratory

## EMPLOYMENT

In February the labour force numbered 6,844 thousand and 2,512 thousand in Canada and Ontario respectively. Both were increases of 2.3% over February, 1964. The numbers employed and unemployed in Ontario were 2,419 thousand and 93 thousand resulting in an unemployment rate of 3.7%. In contrast, the Canadian unemployment rate was 5.8% in February. Both these ratios compare favourably with the 4.7% and 7.0% reports of unemployment recorded in Ontario and Canada during February, 1964.

At the National Employment Service offices in Ontario, the number of applicants registered for employment was 1% lower in February than in January and 14% lower than in February, 1964. The manufacturing and construction sectors reported mixed conditions with several industries experiencing seasonal lulls. However, the demand for skilled labour



remained tight, particularly in the manufacture of iron and steel products, wood products and transportation equipment. Wholesale and retail trades reported few hirings in this normally slack period. The labour force in mining and forestry remained fairly stable with the exception of a shortage of power sawmen.

#### PRICES

Based on 1949=100, the Canadian consumer price index for February climbed to 137.2, an increase of 0.2% from January. The component indices for food, clothing and housing increased 0.5%, 0.3% and 0.2% respectively, followed by an increase of 0.1% for the tobacco and alcohol index and a similar rise for that of health and personal care. Based on 1935-1939=100, the wholesale price index of 30 industrial materials was 257.3 in February, an increase of 0.2% from January. Price increases for beef hides, steel bars, linseed oil and raw rubber were partially offset by decreases for sisal, domestic wheat, tin, raw wool and steers.

#### FINANCE

Canadian monetary conditions eased slightly during February. This was largely attributable to near record high levels in the total money supply combined with a decreased demand for short-term funds.

Cautious trading sentiments were reflected in downward price adjustments in most sectors of the bond market over the month. Short-term outstanding issues were off some 25-35 cents while medium-term maturities registered losses ranging up to \$2.00 on a \$100.00 par value bond. Despite open market activities on the part of the Bank of Canada early in February, international factors prompted a market sell off. Tighter monetary trends in the United States were reinforced by Administration balance of payments proposals to restrict the volume of foreign lending and investments. As a consequence, investor activity from the US has been virtually negligible. This is clearly reflected in the source of new Canadian bond financings during the first two months of 1965. While the total, at \$600.1 million, is up some 2.7% from last year's \$584.3 million, US pay issues, at \$15 million, comprised only 2.5% of this year's total and are 70.0% below last year's total.

On intensified trading volume, irregular price fluctuations characterized activity in most industrial sectors of the Canadian stock markets throughout February. Selling pressures, attributable largely to profit taking, appeared early in the month but by the close had largely dissipated and a modest price recovery occurred. Reflecting the trading pattern for February, the Toronto Stock Exchange Industrial Index fluctuated between a high of 174.45 and a low of 169.47 before closing at 173.08, a decline of 1.18 points from the end of January.

Canada's official holdings of gold and US dollars declined some US \$19.5 million during February to end the month at a level of US \$2,648.7 million. This modest decline is regarded as being largely due to seasonal factors.

For the first time in nearly a year, an appreciable downward adjustment in the value of the Canadian dollar in terms of US funds was registered. From a level of 93.09 cents at the beginning of February, the value of the Canadian dollar steadily declined to close the month at a level of 92.69 cents, down 0.40 cents over the month.

#### BANK OF CANADA ANNUAL REPORT

On Monday, March 15th, Louis Rasminsky, Governor of the Bank of Canada, presented his annual report to the Minister of Finance. While commenting in generally optimistic terms about the present position of the Canadian economy, the Governor did draw attention to the fact that if our growth is to be sustained, special efforts will have to be made to maintain price stability and to avoid balance of payments difficulties. In outlining the economy's areas of apparent and prospective stress, the report drew particular attention to the necessity for Canada to grow at a rate comparable to that attained in the past four years though it did recognize the scope of difficulties likely to be encountered.

In essence, the report stressed that it would be insufficient for Canadian export industries as a whole merely to keep volume increases proportionate to expansion of the markets in which they are selling; likewise, in the home markets, Canadian industry will have to make itself more competitive against imported products. In order to find jobs for an anticipated growth in the labour force during the next few years, Canada will have to expand at a faster rate than most other industrialized countries — a rate which would naturally tend to generate a greater dependence upon imported products. To avoid the corresponding degree of pressure that would be placed upon Canada's balance of payments position will mean that Canada must be able to offset imports by increasing exports through competitive Canadian selling abroad. Referring to the Review of the Economic Council of Canada, the report indicated that Canadian industry will be required to improve consistently and steadily its productivity and at the same time maintain price and cost stability. Mr. Rasminsky, accordingly, endorsed the goals of maximum employment of a growing labour force, price stability, and a strong international payments position.

#### FOREIGN TRADE

According to preliminary statistics, total Canadian exports (domestic and re-exports) were valued at \$586.8 million in January, a decrease of 7.5% from the \$634.1 million level of January, 1964. Though

# SELECTED INDICATORS OF ECONOMIC GROWTH FOR 23 ONTARIO MUNICIPALITIES

## Percentage Change 1963 - 1964

Municipality*	Cheques Cashed	Registration for Employment	Population on Welfare	Index of Employment	Average Weekly Wages and Salaries		Manufacturing		Average Weekly Wages		Electrical Energy Consumption		
					% <sup>(1)</sup>	% <sup>(2)</sup>	% <sup>(3)</sup>	Average Hours	Average Hourly Earnings	% <sup>(3)</sup>	Residential	Commercial	Industrial
Brantford	0.8	-14.9	-24.3	5.0	3.6	-0.3	3.0	2.8	6	16	19		
Chatham	11.9	-29.0	-9.0	n.a.	n.a.	n.a.	n.a.	n.a.	7	17	10		
Cornwall	12.2	-8.2	5.0	n.a.	n.a.	1.4	1.3	2.9	n.a.	n.a.	n.a.		
Fort William	6.8	4.9	-3.1	3.6	3.2	1.8	1.4	3.1	n.a.	n.a.	n.a.		
Galt	n.a.	57.3	-18.3	8.0	6.0	-1.3	4.7	-1.4	7	14	19		
Guelph	9.8	-19.3	n.a.	3.2	3.5	1.1	3.9	4.8	7	12	11		
Hamilton	14.6	-23.3	-14.3	6.2	3.7	1.0	3.4	4.5	6	11	6		
Kingston	14.7	-1.3	5.9	12.5	5.4	0.4	3.7	4.1	6	8	78 <sup>(6)</sup>		
Kitchener	29.2	9.1	3.3	5.5	3.4	0.3	4.1	4.3	3	19	10		
London	21.1	-7.7	3.1	4.1	4.9	1.5	4.3	5.9	7	13	9		
Niagara Falls	10.4	-12.9	-15.5	4.3	4.9	-0.4	3.6	3.2	6	27	15		
Oshawa	20.5	150.5 <sup>(5)</sup>	1.8	8.7	8.2	-0.1	4.4	4.2	13	-4	8		
Ottawa	14.5	-13.1	18.3	3.7	4.1	1.0	3.4	4.4	n.a.	n.a.	n.a.		
Peterborough	21.8	16.3	-10.8	7.6	1.9	0.2	2.4	2.7	20	17	13		
Port Arthur	9.1	-15.0	-9.2	3.6	3.2	1.8	1.4	3.1	n.a.	n.a.	n.a.		
St. Catharines	31.2	86.3 <sup>(5)</sup>	-27.4	8.7	5.4	1.2	4.8	6.1	-10	11	10		
Sarnia	0.5	-18.0	-17.7	1.6	2.7	-0.4	3.7	4.4	22	15	-19		
Sault Ste. Marie	3.5	-22.5	-11.7	5.0	-0.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
Sudbury	2.6	-34.8	-18.0	5.2	1.2	n.a.	n.a.	n.a.	5	5	5		
Timmins	13.8	-13.2	-4.9	-2.5	3.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
Toronto	16.3	-0.9	-4.8	4.8	3.7	0.9	4.2	5.3	-	3	11		
Windsor	18.4	-31.4	-25.6	11.4	8.4	2.4	7.0	9.6	8	7	13		
Woodstock	n.a.	-6.7	n.a.	n.a.	n.a.	-0.1	5.0	5.3	7	12	17		
Total of Reporting Centres	16.1	3.0	-5.6	5.1	3.9	0.7	4.1	4.9	n.a.	n.a.	n.a.		

<sup>(1)</sup> 10 month cumulative change.

<sup>(2)</sup> October 1963 - October 1964 - not annual change.

<sup>(3)</sup> 9 month cumulative change.

<sup>(4)</sup> 12 month cumulative change.

<sup>(5)</sup> High figure resulting from G. M. Strike.

<sup>(6)</sup> Boundary change - the Aluminum Co. was added to the Kingston area in 1964.

\* The geographic area is not necessarily the same for each series.



exports to the United States showed an increase of 8.5%, exports to the United Kingdom, other Commonwealth and preferential rate countries and all other countries declined 19.7%, 3.4% and 28.9% respectively.

Total commodity imports in December, 1964 were valued at \$657.9 million, an increase of 18.2% from December, 1963. Imports from the United States increased 23.4% to \$449.1 million, resulting in an import balance of approximately \$60 million in December. Imports from the United Kingdom and from other Commonwealth and preferential rate countries declined 0.6% and 0.7% from import levels in December, 1963. December imports from all other countries were valued at \$126.8 million, an increase of 15.4% over the previous December.

Total imports for the year 1964 were a record \$7,492.5 million, an increase of over 14% from the previous high of \$6,558.2 million set in 1963.

#### SELECTED INDICATORS OF ECONOMIC GROWTH

The preceding table contains 11 indicators of economic activity for 23 municipalities in Ontario. Most of the series come from separate publications of federal and provincial departments. Extra copies of this table are available from the Economics Branch of the Department of Economics and Development.

It should be noted that the two series titled "registration for employment" and "population on welfare" are comparisons of a single month, October, of 1963 and 1964, and are thus more sensitive to current conditions. This is demonstrated by the unusually high registrations for employment in Oshawa and St. Catharines at the time of the strike at General Motors in the United States.

Several cities made noticeable gains in most indicators. Increases in employment, average wage and salaries and the use of electrical energy substantiate the economic growth that took place in Windsor, Oshawa and St. Catharines. These cities were largely affected by a remarkable motor vehicle production record in 1964. Growth in Brantford, due to the manufacture of agricultural implements and electrical apparatus, is underlined by the increase in industrial electrical energy consumption. Partially on account of the new university, residential building in Peterborough increased considerably.

For purposes of comparison, the reader may refer to a similar table published in the June, 1964 issue of the *Ontario Economic Review*.

#### PROVINCIAL LABOUR MARKETS

In Ontario most labour markets have been fairly near a balance of supply and demand for the past year or two. However, the labour market is a complex combination of a large number of markets with varying degrees of interaction. Differences in skill, in aptitudes and in expectations regarding jobs

divide the work force into more or less isolated labour markets. The labour market is further subdivided by geographical distances.

The chart on the following page gives an indication of the relative employment conditions in some of the National Employment Service Areas. Although an area may have shortages or surpluses of one or two skills, this does not necessarily mean that the area is classified as in labour shortage or in labour surplus. If several occupations show shortages and there is very little surplus labour in total, the area is classified as having a general labour shortage. Likewise, if there are surpluses of labour in several of the main worker categories and few vacancies are available the area is classified as in labour surplus.

Brampton, Stratford and Woodstock have had no months of labour surplus since the winter of 1962-1963 and while they were classified as in balanced supply throughout the past twenty-three months or more, the labour market was fairly tight in these areas through the summer of 1964. Listowel, classified as having a shortage of labour in August, September and October of last year, was in balance for the rest of the past twelve months. It had a slight surplus of labour in the winter of 1963-1964 but has had a balanced labour market this past winter.

Guelph, Kitchener and St. Thomas have also had balanced labour markets this winter whereas last winter they had some surplus of workers.

The only areas which had substantial labour surpluses during the past winter were Cornwall and Bracebridge. Cornwall has had a substantial surplus during every winter since the classifications were first made in 1953 while Bracebridge has had a substantial surplus of labour during every winter since that of 1953-54.

All areas in Ontario have shown some improvement in employment conditions with the continued buoyancy of the economy over the past year. The greatest improvement has been in Owen Sound, Pembroke, Sault Ste. Marie and Simcoe which have usually had long periods of substantial surplus during the winter months when outdoor activity is at its seasonal low. The outlook for continuing high levels of economic activity and continuing increases in investment promise further reductions in labour surplus in 1965 and will probably bring some areas of south-central Ontario into the shortage category this summer.

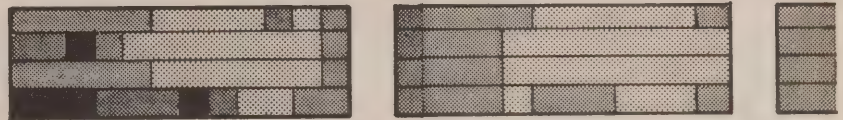
An analysis of labour market trends from 1953 to 1963 appeared in the May, 1964, issue of the *Ontario Economic Review* and copies of the chart of labour market conditions are available from the Economics Branch, Department of Economics and Development.



# CLASSIFICATION OF LABOUR MARKET AREAS IN ONTARIO

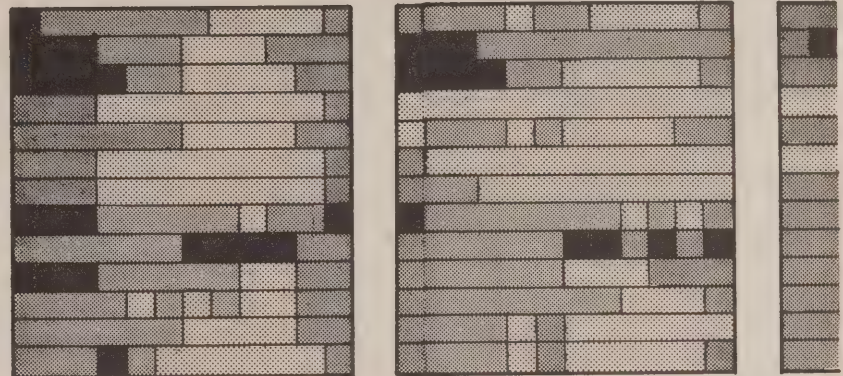
## METROPOLITAN AREAS (1)

HAMILTON  
OTTAWA  
TORONTO  
WINDSOR



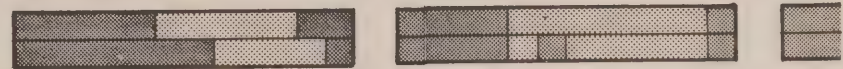
## MAJOR INDUSTRIAL AREAS (2)

BRANTFORD  
CORNWALL  
FORT WILLIAM - PORT ARTHUR  
GUELPH  
KINGSTON  
KITCHENER  
LONDON  
NIAGARA PENINSULA  
OSHAWA  
PETERBOROUGH  
SARNIA  
SUDBURY  
TIMMINS - KIRKLAND LAKE



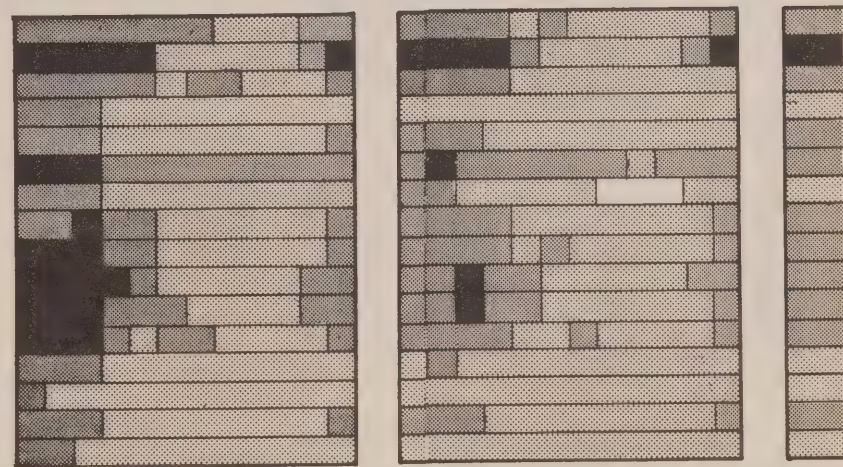
## MAJOR AGRICULTURAL AREAS (3)

BARRIE  
CHATHAM



## MINOR AREAS (4)

BELLEVILLE - TRENTON  
BRACEBRIDGE  
BRAMPTON  
GALT  
GODERICH  
LINDSAY  
LISTOWEL  
NORTH BAY  
OWEN SOUND  
PEMBROKE  
SAULT STE. MARIE  
SIMCOE  
ST. THOMAS  
STRATFORD  
WALKERTON  
WOODSTOCK - TILLSONBURG



J F M A M J J A S O N D  
1963

J F M A M J J A S O N D  
1964

J F  
1965



(1) Labour force more than 75,000

(2) Labour force 25,000-75,000 (60% or more in non-agricultural activity)

(3) Labour force 25,000-75,000 (40% or more in agriculture)

(4) Labour force 10,000-25,000

SOURCE: Labour Gazette

# SIGNIFICANT ECONOMIC CHANGES IN AGRICULTURE

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Changes occurring at a given point of time are hard to appraise unless a long range analysis is also provided. Some changes are cyclical and subject to later disappearance, others lead to new norms of economic operation. There is a danger that we will think everything that is large scale, or particularly well done, is new since our knowledge of the distant past was limited by a lack of communications. Now that we have good roads on which to travel widely through the countryside and radio and television to hear about other distant areas, we are rediscovering many interesting biological processes of life that some farmers have lived with for a long time. Many modern innovations are just readaptations of very old ideas.

Thus we are indebted to the Ontario Agricultural Commission report<sup>(1)</sup> published in 1881 for some intimate glimpses of agriculture as practised in Ontario at that time. First, let us consider some of the current shifts which are not new. For example, in this report, there were interviews with many operators of cattle feeding lots. One of these men (Mr. Wisner) had 1,100 head of cattle on feed. These cattle were mainly fed for export. The same report indicated that hogs were rapidly developing in commercial production. There was even a dissertation in the 1881 report on the advantages of raising broilers on a large scale, close to larger consumer areas. There was also a comment to the effect that while individual farms could use incubators, the more economical method was larger central hatcheries. Thus the basis for commercial production of beef, pork and poultry for export markets was well developed by 1881.

The general tenor of good farming tradition was also well established in Ontario by 1881. In the words of an unbiased observer from Germany, a Dr. Spielberg, who was sent to Canada to look at land suitable for German emigrants:

"Through the kindness of Mr. Hugo Kranz, M.P. specially, I was able to convince myself, in several excursions into the neighborhood of Berlin (Kitchener) and Waterloo, with what care the land is cultivated, and how richly it repays the labours bestowed upon it.

The cultivation of the land is carried on according to the requirements of agricultural science, the changes of crop, the cultivation of clover and the use of animal

manure being handled in the best manner. Fruit culture is carried on with good results, in some districts very extensively. In the use of agricultural machines, the Ontario farmer is far ahead of the German."<sup>(2)</sup>

The report of the Agricultural Commission of 1881 also indicated that many farmers were obtaining crop yields that would look good by present day standards. One might wonder then what really is new. Of course, we know that many changes have taken place; so many in fact that we are in danger of being swamped in detail unless we can group the types of change that have taken place into meaningful classes and content ourselves with some illustrations. The substantive changes in the agricultural economy have largely risen from three sources; petroleum and electric power, new aids to specialization, and changing markets.

## PETROLEUM AND ELECTRIC POWER

The use of farm tractors in Ontario started early, primarily for belt work. Tractors did not make much headway in field use until they were equipped with rubber tires and until the manpower scarcities of the Second World War became severe. Tractors in use on Ontario farms increased from 18,993 in 1931, to 34,478 in 1941, but the main change came after the war. By 1961 there were 150,046 tractors on 102,096 Ontario farms. This was an almost complete change-over in the source of power for field work and an almost complete changeover in the related machines to go with that power.

TABLE I  
FARM MACHINERY ON ONTARIO FARMS  
1921-1961

<i>Year</i>	<i>Tractors</i>	<i>Grain Combines</i>	<i>Balers and Forage Harvesters</i>
1921	7,161	—	—
1931	18,993	—	—
1941	35,460	796	—
1951	105,204	10,031	—
1961	150,046	22,387	37,006

*Census of Canada, 1961.*

Similarly the handling of livestock began to change with the introduction of centrally generated electricity.

<sup>(1)</sup> The Ontario Agricultural Commission indicates an advanced state of commercial production in cattle, c.f. p. 238.

<sup>(2)</sup> Report of the Minister of Agriculture for the Calendar Year, 1882, No. 48 report.



TABLE II  
FARM APPLICATION OF ELECTRICITY  
ONTARIO, 1921-1961

Year	No. Farms Reporting	Electric Motors (Number)	Farms with Electric Milk-ing Machines
1921	12,845	n.a.	n.a.
1931	32,294	9,604	4,007
1941	n.a.	40,137	n.a.
1951	110,595	84,679	37,464
1961	115,453	140,028	44,284

*Census of Canada, 1961.*

The growing availability of power either in tractors or electricity has had many side effects. It has for long spurred the drive to increased scales of farm operation.

TABLE III  
FARM SIZE DISTRIBUTION, ONTARIO, 1921-1961

Year	Over 100 Acres		Over 200 Acres	
	Number	% of Total	Number	% of Total
1921	74,454	37.6	16,136	8.2
1931	77,015	40.1	18,720	9.7
1941	77,210	43.3	20,371	11.4
1951	73,540	49.1	23,783	15.9
1961	64,990	53.6	24,492	20.2

*Census of Canada, 1961.*

The surprising thing, however, is the slowness of adjustment. The most efficient tractor for unlimited acreage would probably be an 85 horsepower track-type vehicle, or a wheel tractor capable of drawing a six-furrow plow. From this ideal, it is obvious that we have scaled our power down to present farm units rather than enlarging farms to fit the most efficient power. This is probably because buildings and land must be in an efficient capital-value balance on a livestock farm. Once this balance is struck — 50 per cent of the value is usually placed in the buildings — it is expensive to change. It is a safe bet that farms will continue to increase in size, but only at a slow rate.

Feeder enterprises that are not dependent on farm acreage can increase very fast. Again, however, the lessons of history are still important in considering long-term trends. We had many thriving feeding operations not dependent on local land in the early 1880's. They largely disappeared in the depression of the early 1890's and did not reappear until the period of cheap feed in the 1920's. These in turn were largely wiped out in the depression of the 1930's and have only begun to reappear in the 1950's and 1960's. While we would hope that depressions like the 1930's will not recur, any period when finished livestock prices fail to keep well ahead of feed prices, such as 1896 to 1920, seems to be a period of danger to large scale feeding operations. It looks as though we may be entering such a period with a growing world-wide demand for cereals and oil seed crops, but with no corresponding increase in effective demand for livestock and livestock products

except in the local market.<sup>(3)</sup> If this is a correct assessment of the situation, we may be due for another swing of the pendulum on large scale feeding, except in those new situations where the feed is cheap and mostly home grown.

Other important effects of the new power available were the displacement of horses, the placing of farms on a cash basis of operation and the provision of almost unlimited power for any emergency. The displacement of horses will be discussed under markets since the effects can be best understood in that context. Horses and their feed were farm grown. Tractors cost money, and so did gas, oil and other farm machinery. These new costs raised new problems in farm financing.

In 1931, real estate—the base for mortgage borrowing—represented about 75 per cent of farm capital.<sup>(4)</sup> Mortgages then provided most of the capital needed to acquire and finance a farm. At present, about half the capital value of our farms is in the form of livestock, equipment, feed and supplies. Obviously this does not provide the same base for real estate mortgage credit. Credit must be financed through one of the many forms of short or intermediate-term loans such as those issued by banks, credit unions, finance companies or merchandise accounts.

In 1963, Canadian farmers had borrowed \$635 million through farm improvement or direct bank loans.<sup>(5)</sup> The other really large source of short-term or intermediate-type credit is probably merchandise or sales credit. Additional trade credit to farmers, estimated for 1962 at over \$500 million, came directly from the head offices of firms dealing in farm equipment and supplies. There was probably an equivalent amount on loan from dealers on their own responsibility. This would all be in addition to householder or personal financing. Since credit costs farmers anywhere from 5 to 25 per cent annually, including interest and other charges, it is desirable that the borrower understand the purposes for which different types of credit are designed and the terms and conditions under which they may usefully be employed.

Horses eat — whether working or not! Farmers usually kept only as many around as were necessary. Most farmers today have more power with tractors than is absolutely needed. Timeliness of cultivation, seeding and harvesting are important factors in crop yields. In several of the crop-cost studies conducted in this area we found that the higher the investment per acre on machinery the higher was the crop yield. There was also some difference in the choice of crops grown. With limited power from horses it was important to choose crops that would distribute the

<sup>(3)</sup> *Agricultural Situation*, February, 1965, U.S.D.A. Volume 49, No. 2.

<sup>(4)</sup> *Census of Agriculture*, 1931.

<sup>(5)</sup> Bank of Canada, *Annual Report*, 1963.



field work over as long a period as possible. With tractors, custom work becomes possible and the choices narrow down to the more profitable crops. Thus, the shift in power available became one of the factors enabling the development of greater specialization in agricultural production.

#### NEWS AIDS TO SPECIALIZATION

The Ontario Agricultural Commission Report of 1881 had this to say:

"A general farmer is the man who carries on a system of mixed farming, working from one hundred to two hundred acres of land, raising just such crops as his soil seems best adapted for, or his convenience demands, keeping his fifteen to twenty head of stock, and a few sheep and hogs, using the milk of his cows for the cheese factory or home dairy, and fattening two or three beasts annually for the market. Such men as those form by far the larger portion of the farmers of Ontario."

The major difference between this description and that of a modern mixed farm is in the number of enterprises kept. There are few farms left in Ontario where one will find more than three enterprises—many farms are now down to one. All developments in the industrial field testify to the value of specialization as a way of using time and talents to best advantage. It is an especial advantage in agriculture where personal attention to living plants and animals is the basis of production.

Specialization is essential today in order to avoid spreading one's attention too thinly. In 1881, however, there were diseases, weeds, lack of soil fertility and insects to control. Diseases were controlled by getting rid of specific plants or animals until nature had a chance to eliminate the disease. This required other crops and other animals to bridge the intervals. Insects were controlled similarly. Weeds were controlled by growing crops that could outgrow the weeds. Fertility required regular rotation of crops with some legumes to gather nitrogen. In 1880, flexibility was essential—specialization was dangerous. We now have many techniques developed which make this flexibility less necessary. These run the whole gamut from fertilizers, sprays, medical controls, plant breeding for disease resistance, certification for freedom from disease, to specific pathogen-free herds and so forth.

Specialization may also occur in the use of soils and climate as well as in the form of human effort. Aids to specialization in the use of soils have been made not only in sprays for weeds and fertilizers, but also in drainage and irrigation. This has made it possible to grow some of our more valuable crops in much wider geographic areas.

All of the above aids have made specific contributions to the level and certainty of agricultural production, but basically their combined contribution has been to the gains from specialization which they have collectively permitted.

#### CHANGING MARKETS

Most of the submissions to the Ontario Agricultural Commission in 1881 stressed the importance of exports of cheese, beef, cattle and hogs to Great Britain. The Western provinces picked up any slack through wheat or grain sales and much later developed competition in livestock production itself. These developments and others have obscured the tremendous growth of the home market *per se*.

The *per capita* supplies of food moving into consumption in Canada is given in the 1963-64 *Canada Year Book* as just about three pounds of solids and a little over one pound of fluid milk per person per day. This consumption weight has varied very little since the first figures became available in 1937. Thus the volume demand for total food supply is largely a function of the numbers of people, or in other words, population.

The reports of the Ontario Department of Agriculture for 1882-1884 indicate that in 1871 the population of Ontario was 1,620,851 and for Canada was 3,635,024. In 1871, 12.3 per cent of the total Canadian population lived in towns and cities of 5,000 or over. By 1881 this had risen to 15.7 per cent. Since we were much closer historically to self-sufficient farming in 1871, it is probable that many of the people in places of less than 5,000 people were raising their own garden vegetables, milk and possibly meat, than at present. Thus in terms of markets, the larger centres would be comparable to all non-farm people at present, since very few non-farm people raise their own food now. By 1961 the population had risen to 18,238,247 of which only 11.7 per cent were living on farms. This would mean that the potential food buyers in Canada in 1871 would be around 447,108,<sup>(6)</sup> while in 1961 they had increased to 16,104,372,<sup>(7)</sup> a thirty-six-fold increase.

Increased Canadian food requirements could easily be met until 1941 largely through an expanding acreage in Western Canada. The total land under farm cultivation has remained almost constant since 1941—the decrease of about 6.5 million acres in Eastern Canada being approximately matched by a similar increase in the Prairie Provinces. However, improved land resulting from new development is still increasing, but more slowly now.

TABLE IV  
IMPROVED FARM LAND IN CANADA

Year	Acres
1901	30,166,033
1911	48,733,823
1921	70,769,548
1931	85,732,172
1941	91,636,065
1951	96,852,826
1961	103,403,426

*Census of Canada, 1961.*

<sup>(6)</sup> 12.3 per cent of 3,635,024 persons.

<sup>(7)</sup> 88.3 per cent of 18,238,247 persons.

The increase in improved acreage was over two per cent per year to about 1931. It has been less than one per cent per year since that time and considerably less than the growth of population which has been running from 1.8 to 3.4 per cent per year compound since the end of the Second World War. We would have been headed for food shortages had it not been for the chemical advances made during the war in sprays and fertilizers, as well as the rapid disappearance of horses which freed many acres for the production of human food. The tremendous advance in chemicals was the result of an all-out program of research under the stress of war. Most of the new chemicals on the market today are merely extended developments of the fundamental research projects initiated to find new chemicals to aid the war effort. Whether we can continue to match nature's development of new and more virulent diseases with new and better controls remains to be seen. It is to be hoped that we can. Expanding food production by extending the margin under cultivation is becoming increasingly more difficult as costs rise.

One factor in increased cattle production has been the fact that cattle have been replacing horses on farms. This change has meant increased cattle production for human consumption without any necessary increase in the productivity of land. In Ontario and Western Canada most of the cattle increases have been in beef stock. In Quebec, however, most

TABLE V  
HORSES AND CATTLE ON FARMS, ONTARIO,  
QUEBEC, CANADA, 1941 AND 1961

	1941 (number)	1961 (number)
ONTARIO		
Horses .....	531,960	88,864
All Cattle (less calves) .....	2,015,174	2,357,857
Total .....	2,547,134	2,446,721
QUEBEC		
Horses .....	332,734	97,430
All Cattle (less calves) .....	1,357,404	1,464,671
Total .....	1,690,138	1,562,101
CANADA		
Horses .....	2,788,795	512,021
All Cattle (less calves) .....	6,371,614	8,594,672
Total .....	9,160,409	9,106,693

*Census of Canada, 1941, 1961.*

of the increase is found in dairy stock. This change-over in Quebec has occurred mainly over the last ten years and has resulted in Quebec's moving from the production of milk at a rate of about two-thirds that of Ontario to slightly more than Ontario's production. The shift from horses to tractors in Quebec is nearly complete and therefore very little additional milk production can be expected from this source in

the future. With population and consumption of dairy products increasing at an annual rate of 1.8 per cent to 2.0 per cent compound, it is probable that price inducements will have to be offered in the future to maintain an expanded production. The same reasons apply for expecting better compensation for beef production over the years ahead.

In 1963, many farm products similar to those grown in Ontario were imported in quantities varying from \$15 to \$45 million each. In fact, total Canadian agricultural imports in 1963 were valued at \$1,032,219,151. This contrasts with total agricultural exports in the same year of \$1,461,827,662. However, these exports were largely Western Canadian cereals. When it is realized that about another \$300 million worth of the exports were made up of

TABLE VI  
CANADIAN AGRICULTURAL EXPORTS, 1963

Western Wheat Flour .....	\$ 62,454,351
Western Wheat .....	782,228,737
Total Western Wheat .....	\$ 844,683,088
Agricultural Exports Less Wheat ....	617,144,574
Total Exports .....	\$1,461,827,662

*Trade of Canada, 1963.*

other Western cereals and their end products, the picture of Eastern Canada as an area with net agricultural surpluses fades rather far into the dim past.

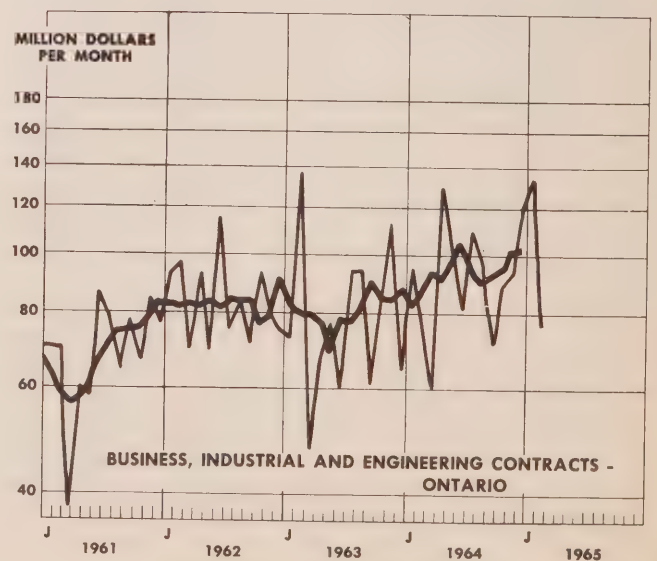
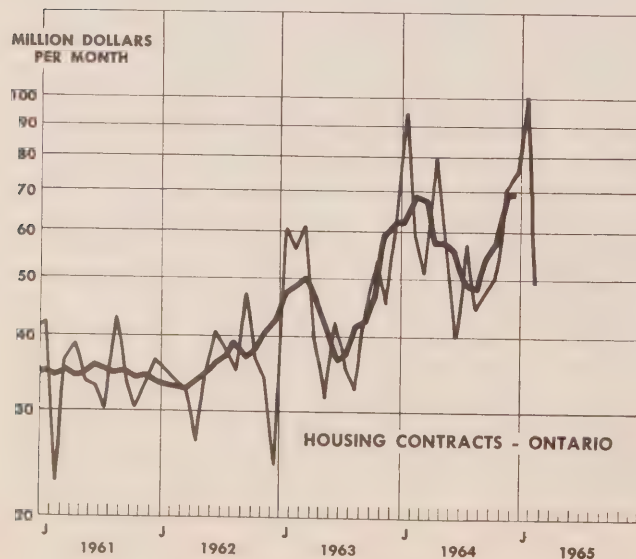
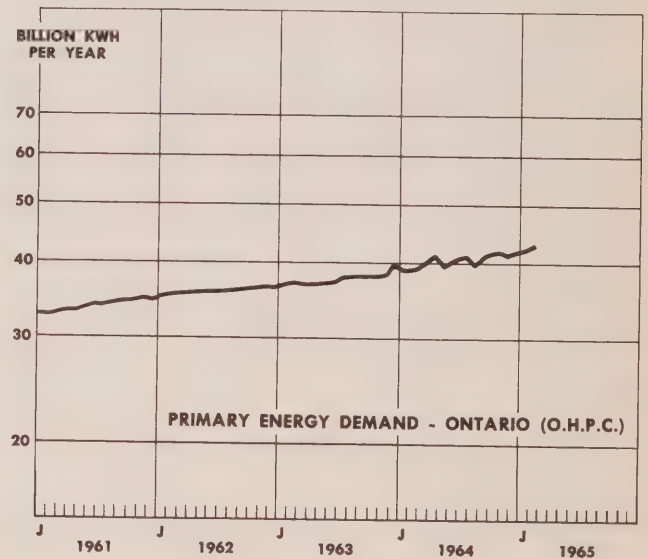
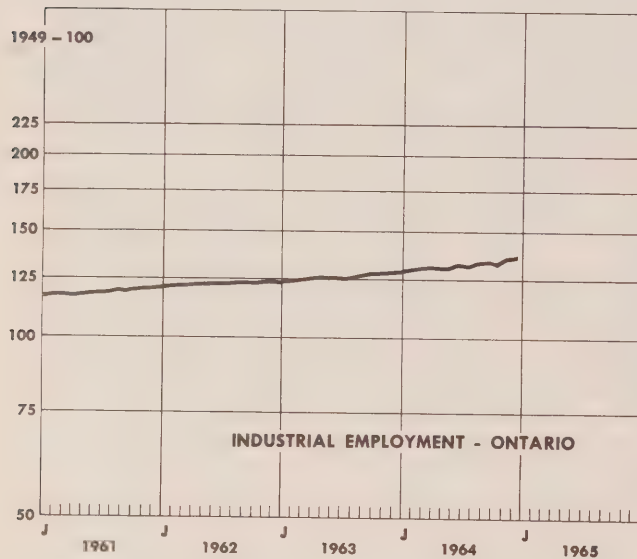
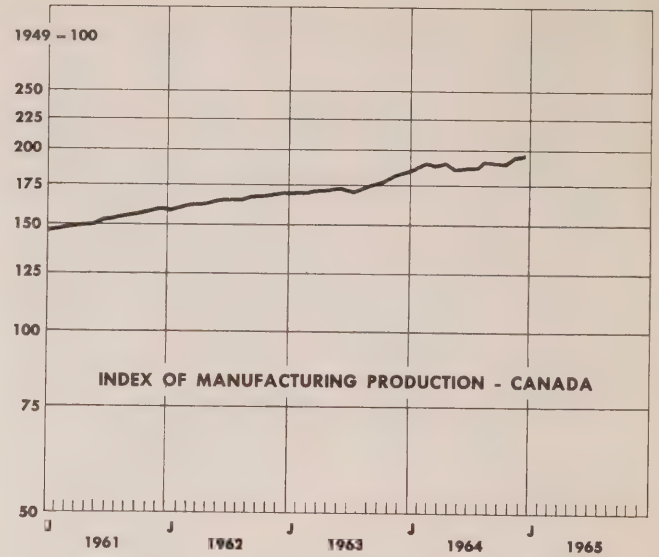
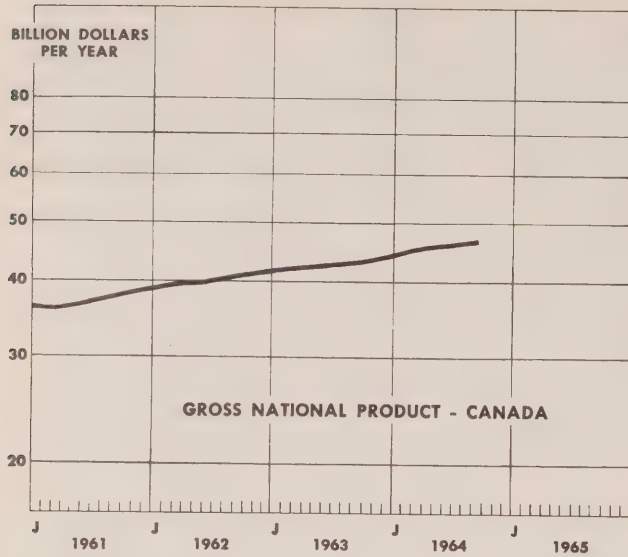
The agricultural imports were nearly all products we can produce here with the exception of tea, coffee, citrus fruits and bananas. The tea and coffee imports amounted to \$90 million in 1963, while citrus fruits and bananas came to about \$110 million. If we leave these items out of imports and Western cereals out of exports we have about \$800 million in imports and only \$300 million in exports of the type of agricultural products we can grow in Eastern Canada.

Some of the items are seasonal in nature, but even that is not necessarily a valid reason for importing. Peas used to be imported fresh in winter-time. Quick freezing has now made Canada a net exporter of fresh peas. Many other fresh products may also ultimately yield to improved technology. The steady growth of consumption as population rises brings further possibilities for future development of the domestic market. It was the potential room for improvement in both export and domestic markets that resulted in the optimistic attitude at last year's Outlook Conference.

At least one condition in agriculture has not changed since 1884. At that time, Rev. Wm. F. Clarke, the key speaker at a meeting of the Dairy-men's Association of Western Ontario, commented: "A great painter, Sir Joshua Reynolds, I think, was once asked by a tyro how he mixed his paints. His answer was, '*with brains, sir!*'". The time has come when farming must be done "*with brains, sir!*"



# ECONOMIC INDICATORS—SEASONALLY ADJUSTED

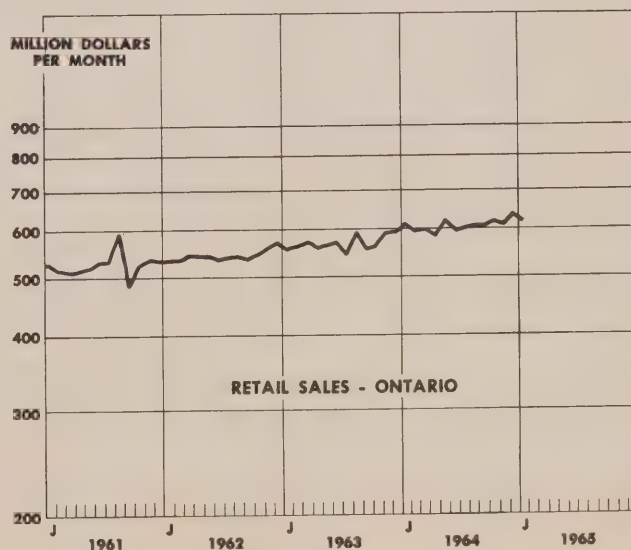
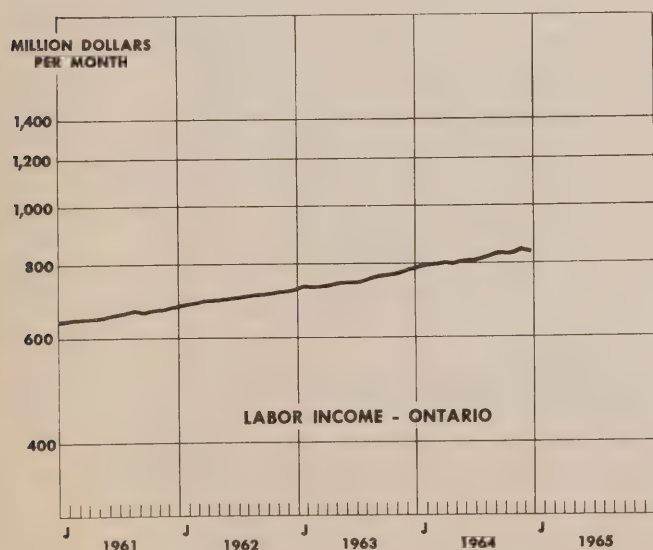
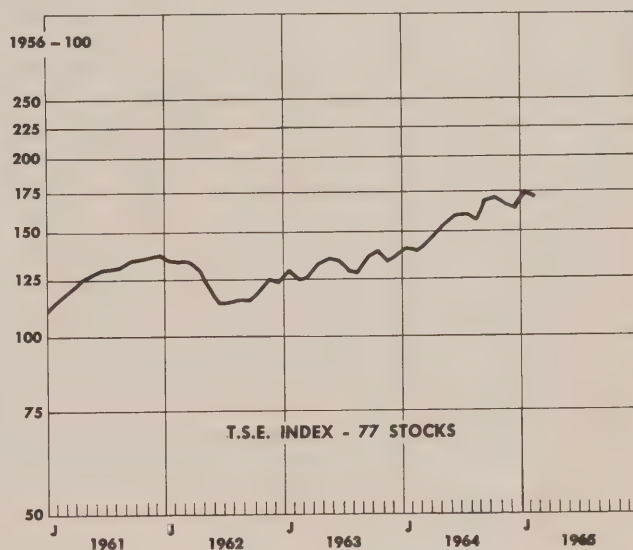
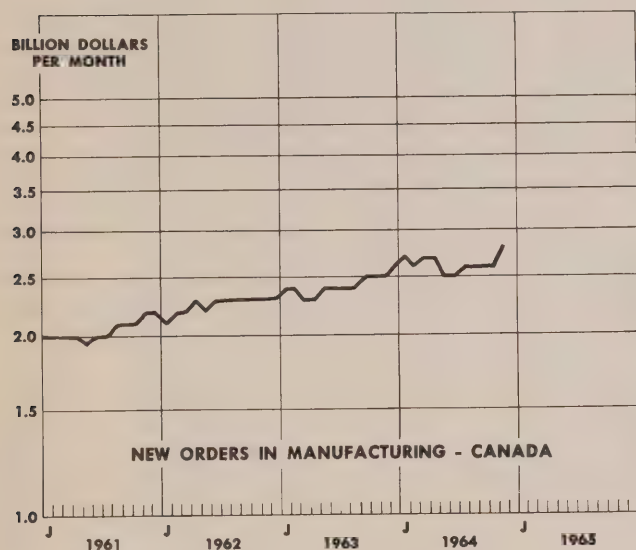
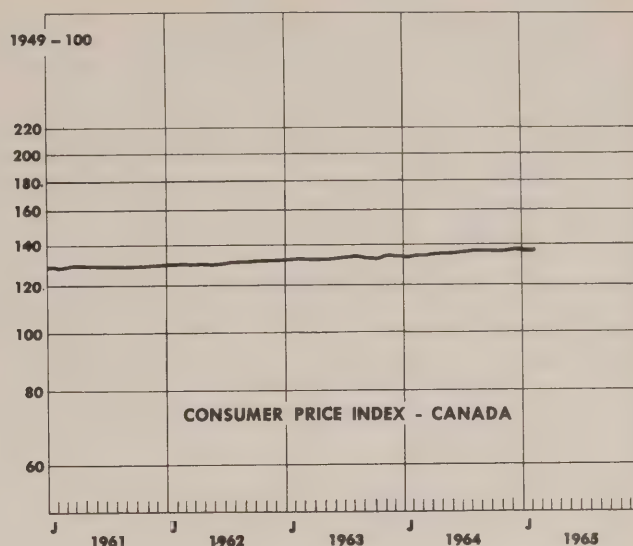
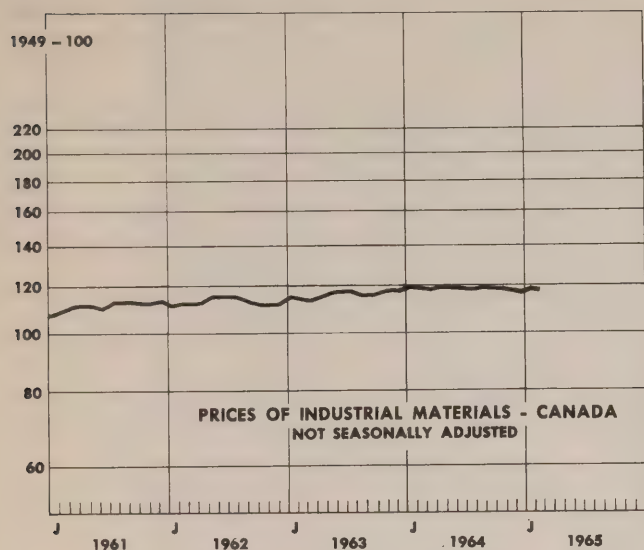


— TREND CYCLE

— SEASONALLY ADJUSTED MONTHLY FIGURES



# ECONOMIC INDICATORS—SEASONALLY ADJUSTED



ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED

(\* Figures for Canada)

	1964												1965											
	January	February	March	April	May	June	July	August	September	October	November	December	January	February	January	February	January	February	January	February	January	February	January	February
<u>LEADING INDICATORS</u>																								
Average Weekly Hours Worked in Manufacturing	41.6	41.4	40.9	41.1	41.3	41.1	40.8	41.1	41.3	41.1	40.8	41.3	41.1	40.8	41.1	40.8	41.1	40.8	41.1	40.8	41.1	40.8	41.3	73
Business Failures - Number	78	81	61	75	80	102	95	81	77	97	59	84	93	59	84	59	84	59	84	59	84	59	84	73
Business Failures - Liabilities	3,493	1,574	2,194	6,754	11,965	12,832	10,424	2,738	8,578	8,215	2,895	1,801	3,006	2,895	1,801	2,895	1,801	2,895	1,801	2,895	1,801	2,895	1,801	4,588
New Orders in Manufacturing*	2,675	2,559	2,698	2,685	2,506	2,549	2,554	2,591	2,603	2,623	2,775	1,64.3	173.3	2,775	1,64.3	2,775	1,64.3	2,775	1,64.3	2,775	1,64.3	2,775	1,64.3	171.9
T.S.E. Index - 77 Stocks	140.5	138.7	143.3	148.6	155.3	158.9	160.5	156.6	169.6	171.2	166.0	164.3	173.3	166.0	164.3	166.0	164.3	166.0	164.3	166.0	164.3	166.0	164.3	171.9
New Dwelling Unit Starts	5,470	4,899	3,676	4,136	4,087	4,238	5,213	4,626	4,068	5,303	5,962	5,559	100.3	5,962	5,559	5,962	5,559	5,962	5,559	5,962	5,559	5,962	5,559	49.2
Housing Contracts	94.5	58.8	51.5	80.0	56.9	40.1	57.6	44.9	47.7	51.3	71.7	75.7	100.3	71.7	75.7	71.7	75.7	71.7	75.7	71.7	75.7	71.7	75.7	49.2
Business, Industrial and Engineering Contracts	95.5	78.8	60.1	130.3	104.9	81.5	109.6	97.5	71.8	89.9	93.6	120.3	133.1	93.6	120.3	93.6	120.3	93.6	120.3	93.6	120.3	93.6	120.3	76.8
Money Supply*	16,747	16,758	16,863	16,986	17,095	17,176	17,346	17,448	17,517	17,391	17,502	17,610	17,855	17,502	17,610	17,502	17,610	17,502	17,610	17,502	17,610	17,502	17,610	17,855
<u>COINCIDENTAL AND LAGGING INDICATORS</u>																								
Gross National Product*																								
Total Industrial Production*	210.8	212.3	210.2	214.7	209.4	211.3	210.9	214.3	213.5	214.2	219.8	221.5		219.8	214.2	219.8	221.5		219.8	214.2	219.8	221.5		
Total Manufacturing	185.2	188.6	186.3	190.4	185.6	187.7	186.3	191.1	190.1	188.8	194.1	195.1		194.1	188.8	194.1	195.1		194.1	188.8	194.1	195.1		
Non-Durables	179.7	184.2	180.1	185.5	180.9	183.3	181.4	184.9	184.7	186.5	190.1	193.5		190.1	186.5	190.1	193.5		190.1	186.5	190.1	193.5		
Durables	191.6	193.8	193.6	196.1	191.0	188.6	192.1	198.4	196.4	191.5	198.8	197.0		198.8	191.5	198.8	197.0		198.8	191.5	198.8	197.0		
Mining	335.2	324.9	317.3	321.0	321.1	329.5	316.0	313.7	308.1	320.8	335.7	331.6		335.7	320.8	335.7	331.6		335.7	320.8	335.7	331.6		
Electric Power & Gas Utilities	391.2	384.3	396.4	409.3	384.5	403.5	412.2	403.7	416.1	426.9	418.7	441.9		418.7	426.9	418.7	441.9		418.7	426.9	418.7	441.9		
Cheques Cashied in Clearing Centres	3,470	3,763	3,754	3,540	3,705	3,749	3,602	3,620	3,891	3,789	3,600	3,688		3,600	3,789	3,600	3,688		3,600	3,789	3,600	3,688		
Retail Trade	612	600	603	584	621	602	608	611	610	623	618	635	623	618	623	618	635		618	623	618	635		
Labour Income	790	795	800	798	803	809	814	824	840	835	840	837		840	835	840	837		840	835	840	837		
Industrial Employment	130.7	131.5	132.1	131.5	131.4	132.6	131.7	134.0	134.6	133.4	136.3	136.9		136.3	133.4	136.3	136.9		136.3	133.4	136.3	136.9		
Average Hourly Earnings in Manufacturing	2.09	2.09	2.11	2.10	2.11	2.13	2.13	2.16	2.18	2.15	2.14			2.14	2.15	2.14			2.14	2.15	2.14			
Primary Energy Demand - ORPC	38.84	38.97	39.88	41.25	39.33	40.98	41.01	39.79	41.08	41.81	41.29			41.29	41.81	41.29			41.29	41.81	41.29			
New Dwelling Unit Completions	2,641	4,495	10,184	6,240	3,454	3,095	4,876	3,798	4,519	4,160	2,969			2,969	4,160	2,969			2,969	4,160	2,969			
<u>ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED</u>																								
Labour Force (1)	2,465	2,455	2,481	2,485	2,527	2,606	2,649	2,646	2,544	2,546	2,552	2,548	2,540	2,552	2,546	2,552	2,548		2,546	2,552	2,548			
Employed (1)	2,345	2,340	2,376	2,396	2,457	2,518	2,574	2,578	2,489	2,472	2,491	2,472	2,442	2,491	2,472	2,491	2,472		2,472	2,491	2,472			
Unemployed (1)	120	115	105	89	70	88	75	68	55	74	61	76	98	61	74	61	76		76	61	76			
Unemployed as % of Labour Force (1)	4.9	4.7	4.2	3.6	2.8	3.4	2.8	2.6	2.2	2.9	2.4	3.0	3.9	2.4	2.9	2.4	3.0		3.0	2.4	3.0			
Prices, Industrial Materials*	259.5	258.6	257.1	258.6	258.7	257.8	257.3	259.9	258.8	258.0	258.5	256.2	256.7	258.5	258.0	258.5	256.2		258.0	258.5	258.0			
Domestic Exports*	619.0	534.2	583.0	651.4	670.5	774.6	772.4	674.1	725.4	669.9	706.6	714.2		706.6	669.9	706.6	714.2		669.9	706.6	669.9			
Imports for Consumption*	565.9	512.4	576.6	704.0	657.7	687.6	637.9	566.2	616.9	637.1	674.6	657.9		674.6	637.1	674.6	657.9		637.1	674.6	637.1			
Foreign Exchange Reserves*	2,582	2,542	2,466	2,481	2,509	2,534	2,534	2,576	2,625	2,687	2,743	2,674	2,668	2,743	2,687	2,743	2,674		2,687	2,743	2,687			

(1) For a few months, the labour reports shall not be adjusted for seasonal variation. New influences have made it necessary to revise the seasonal adjustment program appropriate to the Ontario economy.

# ONTARIO ECONOMIC REVIEW



DEPARTMENT OF ECONOMICS AND DEVELOPMENT

*Hon. Stanley J. Randall, Minister*

*Stuart W. Clarkson, Deputy Minister*

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# THE ONTARIO ECONOMY

Recently published figures indicate that the Canadian Gross National Product in 1964 was \$47.0 billion. This is an increase of 9% from 1963 and represents the largest annual gain since 1956. In Ontario, the economy was strong in the first quarter of 1965. After slight declines in February, production levels recovered in March. At 90,545 units, the March production of motor vehicles surpassed all previous monthly records. Construction awards in March (residential and non-residential) rose to \$173 million seasonally adjusted, an increase of over 30% from the previous month. Provincial unemployment in March was 79 thousand or approximately 3.1% of the labour force before seasonal adjustment.

## PRODUCTION

The seasonally adjusted Canadian Industrial Production Index reached a new high in January. Based on 1949 = 100, the index was 224.6, an increase of 1.5% from December, 1964. Over the previous month, mining and durable manufacturing showed increases of 2.8% and 4.0% respectively. Non-durable manufacturing, and electric power and gas production declined 0.3% and 1.3% in a similar comparison.

Due mostly to increased production of iron ore, the metals index rose over 8% from December. A lower level of asbestos production caused the non-metals index to decline slightly. Increased production of coal and petroleum led to a 1.1% rise in the fuels index.

Among the non-durables, increases took place in the production of beverages and textiles and in printing and publishing. There were declines in the manufacture of clothes and products of tobacco, rubber, leather, paper, chemicals and petroleum. Increased production of transportation equipment, electrical apparatus and supplies and wood products caused the strong rise in durable manufacturing.

Steel ingot production in March set a new monthly record at 823 thousand tons. This was an increase of 7% from the previous March and brought the total for the first quarter to 2,369 thousand tons. Pig iron production during March was 543 thousand tons. Though this represents a 6% increase over February, it is lower than either the production in March, 1964, or the record set in January of this year (602 thousand tons). The total for three months is 1,658 thousand tons, an increase of 4% over the first quarter of 1964.

At 90,545 units, the March output of motor vehicles was the highest for any month on record. Production of passenger cars and trucks numbered 75,649 and 14,896 bringing the three-month totals to 185,602 and 35,514 units respectively. As a result, the production of motor vehicles for the first quarter of 1965 was well ahead of the comparable period in 1964, or in any previous year.

## CONSTRUCTION

In Ontario both housing contracts and business, industrial and engineering contracts rose in March after relatively low levels in February. March levels for each category were \$58.7 million and \$114.3 million seasonally adjusted — increases of 19% and 49% from February.

In February, new dwelling unit starts in Ontario numbered 5,798 on a seasonally adjusted basis — a large increase over the January figure of 4,318.

On an unadjusted basis, the value of construction awards (residential and non-residential) in the first three months of the year was \$404 million and \$950 million in Ontario and Canada respectively. These levels are increases of 24% and 10% over the comparable period in 1964.

In Ontario, construction contracts awarded in March totalled \$123 million of which 53% were for projects of \$1 million and over. The following table lists the more notable awards.

LARGE CONSTRUCTION AWARDS PLACED  
RECENTLY IN ONTARIO

<i>Location</i>	<i>\$ million</i>	<i>Description</i>
Ajax	3.0	Plant addition
Brantford	5.0	Shopping plaza
Crowland Twp.	1.3	Factory addition
London	1.1	Trunk sewer
North York Twp.	6.5	Hospital
North York Twp.	7.6	Apartment buildings
Ottawa	4.0	Office building
Ottawa	5.4	Railway freight terminals
Sault Ste. Marie	1.5	Shopping centre
Sudbury	2.7	University building
Toronto	8.0	Office building
Sheridan Park	4.0	Research centre for Atomic Energy of Canada Ltd
Waterloo	1.0	University building

## EMPLOYMENT

The Ontario labour force numbered 2,535 thousand in March, an increase of 1.6% from a year ago. Though the labour force was only 0.3% above that in February, the number of employed rose from a February level of 2,434 thousand to 2,456 thousand, an increase of nearly 1%. As a result, unemployment declined from 93 thousand in February to 79 thousand in March.

The reader should note that in March the Dominion Bureau of Statistics altered its labour force statistics to make use of 1961 Census population data. Revised monthly estimates are now available back to 1956 and are the source for labour data presented at the back of this publication.

## SALES AND CREDIT

Ontario retail sales for February were valued at \$521.3 million, a decline of 1% from February, 1964. Because of a high January level this year, the cumulative level for the first two months was only 0.3% lower than during the comparable period in 1964. In a comparison between the two periods, sales of shoes and men's clothing, sales through garages and filling stations and variety goods outlets showed gains of 3% or over. Sales of lumber and building materials were more than 12% lower this year than in the first two months of 1964. Motor vehicle sales for the first two months were about 4% lower than in the same period in 1964. Sales of furniture, appliances, radios and women's clothing declined by approximately 2%.

Credit statistics for December, 1964 indicate that in Canada, outstanding consumer credit balances were approximately 16% above the year-end level of 1963. Balances on personal loans through chartered banks showed increases of over 20%, followed by increases of 10-12% for credit balances extended by department stores, small loan companies and sales finance companies.

## PRICES

The Consumer Price Index was 137.3 in March, based on 1949 = 100. This was an increase of 0.1% from February and an increase of 2.0% from March, 1964. Since February, four of the seven main components increased and one decreased. The clothing index advanced 0.8% to 120.4 due to price increases for men's, women's and children's wear, footwear, laundry and shoe repairs. The indexes for food, housing and tobacco and alcohol increased 0.2%, 0.1% and 0.1% respectively. The health and personal care index and the recreation and reading index showed no change from the previous month. Price increases for licenses, repairs, oil and batteries were more than offset by lower prices for new cars, gasoline and tires. As a result, the transportation index dropped 0.5% from February.

The Wholesale Price Index of 30 Industrial Materials advanced 0.3% during March to end the month at 258.4 based on 1935-39 = 100. Decreases for raw wool, sisal and linseed oil were more than offset by increases for raw sugar, tin, beef hides and raw rubber. The Wholesale Farm Products Index rose 0.2% over the month to 225.1 based on 1935-39 = 100. Higher animal prices, particularly in eastern markets, were partially offset by lower field crop prices.

## FINANCE

Monetary conditions throughout the Canadian money market remained virtually unchanged through March. Loanable funds continued to be in plentiful supply, meeting the modest increase in demand. Reflecting this situation, the day-to-day loan rate fluctuated narrowly in the 3%-3½% range.

Highlighting activity on Canadian bond markets was the flotation of a \$175 million short-term Government of Canada refunding issue and a \$50 million 5¼% Province of Ontario 20-year bond issue. The presentation of Finance Minister Gordon's Estimates of \$7.4 billion caused minor downward price adjustments. However, this sell-off was short-lived and prices quickly recovered to close the month fractionally above the month-end quotations of February.

New bond financings for the first quarter of 1965 totalled \$1,176.6 million—an increase of some 39.0% over 1964's comparable total of \$846.3 million.

Prices of quality industrial equities throughout most sectors of the Canadian stock exchanges tended to improve during the first half of March, but thereafter were subject to profit-taking pressures. The Toronto Stock Exchange Industrial Index closed the month at a level of 171.67, an overall decline of 1.41 points on Index over the month.

Canada's foreign exchange reserves (official holdings of gold and US dollars) declined by US \$94.6 million during March and closed the month at a level of US \$2,554.1 million. Contributing to this net outflow was a composite of factors, prominent amongst which were the month's absence of sizeable new borrowings in foreign markets, and quarterly dividend payments to foreigners.

Despite some slight selling pressure throughout most of March, the Canadian dollar in terms of US funds closed the month at a level of 92.61 cents—down only 0.08 cents over the month. Most of the recovery took place in the last few days of the month following a low of 92.33 cents set on March 24.

## FOREIGN TRADE

Preliminary figures indicate that commodity exports (domestic and re-exports) were valued at



\$557.3 million for February, an increase of 1.4% from February, 1964. This resulted in a total of \$1,144.1 million for the two-month period, a decline of 3.4% from the same period last year.

Commodity exports in January were 8.1% lower than in January, 1964 mainly as a result of lower trade with the United Kingdom (-20%), the European Common Market (-4%), and Eastern Europe (-90%). The lack of major wheat exports to Russia accounts for the decline to Eastern Europe. Exports to the Republic of South Africa and Mexico were substantially lower than in January, 1964. Exports to Australia and New Zealand remained about the same. The major increase was in exports to the United States, up 8% from the previous January.

Exports of food, feed, beverages and tobacco declined 26%, and exports of inedible fabricated materials declined 9% (with decreases of 42% and 23% in exports of aluminum and copper respectively). Exports of live animals and inedible crude

materials remained approximately the same as in January, 1964. Increases in exports of natural gas and ores of iron and zinc were counter-balanced by decreased exports of nickel, copper, and radioactive ores.

January exports of inedible end products were valued at \$88.5 million, an increase of 18% over the previous January. Exports of industrial machinery and agricultural equipment rose 12% and 21% respectively, and those of motor vehicles, engines and parts rose 58%.

Imports in January were valued at \$559.8 million, a decline of 1.1% from January last year. Imports from the United Kingdom rose 4% to \$39.5 million while imports from the United States declined less than 1% to \$412.1 million. The greatest decline in import levels came from other Commonwealth and preferential rate countries, down 28% from January, 1964 to \$19.9 million. Imports from all other countries rose 2% to \$88.3 million.

## THE GROWTH AND DEVELOPMENT OF THE FURNITURE INDUSTRY IN ONTARIO

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The Canadian furniture industry originated in Ontario around the middle of the nineteenth century. About this time, the country was opening up, many communities in Upper and Lower Canada had become established and the West was gradually being settled. Demand for furniture was growing and settlers were no longer content with the simple, more functional articles of the pioneers. Only a few pieces of finer work were available, turned out by a handful of skilled craftsmen, who had come over with the early French and English nobility.

The first furniture centres were established in the South-Western part of Ontario, in the countries of Oxford, Perth, Waterloo, Huron, Bruce and Grey. Many of the early factories began as off-shoots of saw mills located near an abundant supply of lumber.

The early settlers, often of Swiss and German origin and skilled in crafts, came from Pennsylvania to make their homes in Waterloo and the neighbouring counties. Those who were cabinet makers settled near the saw mills and started to make furniture and other wooden articles for

Canadian homes.

One of the first furniture factories was established in Berlin (now Kitchener) by Jacob Hoffman in 1830. Later, about 1834, Jacques Hay built a factory in Toronto which ultimately acquired a wide reputation for quality furniture. Other early factories were started at Napanee in 1835, at Woodstock in 1843, and a number at Hanover, Oshawa and Bowmanville in the 1860's.

A typical story of the early 1860's tells of a young man who walked through the bush with his carpenter's kit, from Waterloo county to the Queen's Bush. There he found work splitting rails for fifty cents per hundred. Then he bought some lumber from the local saw mill and, at night, made articles of furniture which he sold to the farmers. In this way he obtained a little money as well as some farm produce which he sold to the local grocer. With the money he bought more lumber. He continued to do this until he had acquired enough capital to join others in starting a furniture factory. The firm that he and his partners formed progressed steadily; later some of the executive staff

started their own plants nearby and so developed a furniture-factory town.

During the 1870's, quite a number of new furniture enterprises became established, particularly in and about Berlin and Waterloo. A majority of these are still in existence today. In fact, many firms still exist in Ontario which were founded ninety years or more ago, and several are still controlled by the families which established them. Some of the pioneer names, including Jacob Hoffman and Jacques Hay, mentioned above, are Thomas Bell of Southampton, Daniel Knechtel of Hanover, W. T. Gibbard of Napanee, Andrew Malcolm of Kincardine, John S. Anthes of Kitchener, Simon Snyder of Waterloo, James Baird of Plattsville, U. A. Gruetzmer of Hespeler and J. D. Hay of Owen Sound.

Almost all of the prominent establishments were founded between 1860 and 1865. At least, this seems to have been the period for awakening to the possibilities of concentrated effort. It was a period when the population of Canada received considerable impetus from conditions both in the homeland and in the United States. The Civil War undoubtedly helped, not only towards swelling the population of Canada at the time, but to increasing the industrial prosperity of the country through the increased demand for Canadian commodities.

The period of 1860 to 1880 witnessed the foundation of Canada's first real effort to produce furniture to meet the requirements of all classes of her population. When a protection policy was established by the government in 1878, further impetus was given to an industry which would be considered as one of those natural to the country.

It cannot be said that Canadian cabinet makers originated a style which influenced designs throughout the world. In many cases, they adopted those of England and France. However, through modification of design (chiefly functional) and the use of Canadian woods, they produced many pieces easily recognizable as being of an authentic Canadian origin.

In Ontario, wood itself was used to the best advantage. Of course, full advantage was taken of the art of turning. To enhance the appearance of the piece, an Ontario cabinet maker would add legs, drawer fronts and panels made from a different type of wood, in many cases cherry or figured maple. Curly and birds-eye maple were the favourite woods and were used for table tops, grains of chests and often for complete pieces. Cherry was used for complete pieces or combined with figured maple, birch and walnut. It was often used for the frames of chests having mahogany drawer fronts.

Canadian black walnut was used as an all-purpose wood and many of the finest examples of the Ontario cabinet makers' art were produced in

walnut. Chair makers favoured walnut as it has greater strength than has pine and is not so difficult to shape and carve as is maple.

Many Ontario pieces, have been found with frames made from butternut. Door and drawer fronts were made from curly maple. The butternut was usually stained to represent walnut or mahogany to contrast with the maple which was often finished in a natural colour.

Historically, Ontario began to produce furniture by using experienced craftsmen and skilled cabinet-makers, resulting, down to the present day, in a much larger proportion of higher quality furniture being made in Ontario than elsewhere in Canada.

Only a few factories were established in Quebec before 1900, one as early as 1863 and another in 1870. By far, the largest percentage of total Canadian furniture production before 1900 was carried on in Ontario.

Although the classification for furniture production in Canada has changed over the years, production in 1871 (as near as can be estimated) was valued at \$3.6 million and employment in the industry was 4,366. Ontario's production at this time was \$2.3 million, or 64 per cent of the Canadian total. The number of jobs provided was 2,769 persons.

By 1901 Ontario's share of the Canadian production had grown to over 80 per cent of the Canadian total, as against only 13 per cent for Quebec. At that time, production in Ontario was valued at \$5.2 million and the number of persons employed was 5,129.

Soon after the turn of the century, further demands for furniture resulted in an even greater expansion in the industry. In the period between 1900 and 1920, as prosperity became more widespread, larger homes were built and the furniture used became more massive. The dining room especially held an important place in the home. Whole dining room suites became important. Up to the early years of this century, many factories made only certain lines—one made tables; another, chairs; another, sideboards and so on. Very few factories made the pieces for a complete suite. Because there was much difficulty in matching colour when the furniture dealer got the separate pieces together for sale, more factories began to make complete suites.

The growth that the industry enjoyed at the time can be appreciated by the fact that in 1930 the value of furniture production was \$27.6 million or 14 times as much in 1871 and about 5 times as much as in 1901. Employment from the industry had risen to 8,732. At this time, Ontario still accounted for 75 per cent of the Canadian total.

Furniture is an "elastic commodity"; the industry is very sensitive to economic changes. It drops



rather quickly in times of recession and then gradually builds up to full activity when favourable conditions again prevail. The depression of the 1930's hit the industry hard. Production in Canada dropped from \$36 million in 1930 to \$12 million in 1933, and many plants were closed, never to be re-opened as furniture factories again.

In the remaining thirties, and in the early forties during World War II growth in the industry was slow and uneventful. However, with the termination of the war, a resultant pent-up demand for consumer goods caused the furniture industry to undergo a considerable change, not only from the standpoint of style and operation, but also in the volume of business.

The supply of native wood in Ontario, especially walnut, cherry and chestnut, was greatly diminished and many firms were forced to seek sources of supply elsewhere. Elm, birch, maple and basswood had to be supplemented by imports of oak, mahogany, and walnut from the United States. A considerable amount of native wood was now used in the form of veneers and plywood and much more was also imported. Most important, the heavy demand for furniture after the war brought about the need for more mass-produced methods of operation in the industry—something Ontario manufacturers have been reluctant to do.

By 1950, total Canadian production was valued at \$111 million and Ontario's share had dropped to 51 per cent of the industry's output; Quebec had 32 per cent; British Columbia, 7.8 per cent; the Prairie Provinces, 2.2 per cent; and the Maritime Provinces, 7 per cent. At the time, there were 17,600 employees in the industry throughout Canada.

In recent years, the greatest change in furniture making is the almost complete swing from traditional to contemporary design. In style, the Scandinavian modified by the American Modern seems to have exerted the strongest influence. Many period styles have rejected dust-catching ornaments and have taken on cleaner, simpler lines in various finishes ranging from high gloss to new dull tones. Stainless steel finishes have become popular since they defy the abuses of large families and still look new after a quick wipe.

The construction industry also played an important role in determining the type and styles of furniture today. The trend towards suburban living and a growth of development projects around the fringes of the larger centres show the change in furniture trends. Homes are smaller and more compact, yet families are growing larger; so that the popular bungalows and split-levels are usually laid out on the open plan to make the most of all available space. These homes and these families need furniture that is designed to save space and do double duty. Yesterday's enormous buffet is today's

low-boy, which may serve also as a room divider and tomorrow may be used as a dresser. This has tended to diminish the importance of the dining room and to accentuate demands for dinette sets.

Family centered activities including T.V., HiFi, and hobbies have stimulated the demands for not only basement recreation rooms but also main floor family rooms. These new kinds of rooms create new furniture needs. This has given rise to an increased use of many materials that were previously little used by furniture manufacturers. Kitchen sets featuring tables with laminated plastic tops in wood grains and marble effects are standard today. The use of metal in home furniture has steadily increased. Chrome-plated tubing in dinette suites has paved the way for many other materials such as brass, stainless steel, aluminum, copper and wrought iron. These are combined with cloth, glass, plastic, plastic coated wood, plywood and various molded plastic surfaces. Upholstered furniture has not escaped this transition. Substances such as foam rubber, rubberized hair, and man-made synthetic fibres have made a place for themselves in the industry.

Other changes have been made by the manufacturers themselves. Chip board and fibre board are making a bid to replace standard lumber and plywood as a raw material. Other substances are laminated to them to give the finished product an acceptable appearance. Plastic materials are also in common usage. Synthetic materials are finding many varied uses from upholstered furniture to outdoor pieces combined with metal. With the trend for suburban living, manufacturers have enjoyed an expanded market for outdoor and patio furniture.

Cabinet-shop operations have been modified because of other changes in the industry. The cabinet department has become more of an assembly place. Greater accuracy in machining has done away with the extensive use of planes and chisels.

The last touch in the finishing of furniture was formerly the application of several coats of shellac and varnish with a hand brush, a long process. Now this process is done with a spray gun followed by a lacquer. These two changes, with other minor ones, have greatly speeded up production.

The curing of lumber in storage yards has been greatly improved with better piling methods and more accurate control of kiln processes. Better electric machines and tools have been developed resulting in greater flexibility.

Imports have also increased over the past decade. This is true for wooden furniture as well as metal furniture. These imported goods compete with the products of domestic manufacture, usually the higher-priced lines. They find a place in our market where there are people willing to pay for modern design. The value of imports has, until now, remained below 10 per cent of total Canadian produc-



tion but there are indications, that this percentage has been rising rapidly in recent months.

As a result of import competition, manufacturers in Ontario have tended to concentrate their efforts on the higher-priced lines of goods. Competitors in other provinces, being newer entries into the industry, have more up-to-date equipment and are more suited to mass production, tending to cater to the volume market. Quebec, for example, makes a much higher proportion of low-priced merchandise. This is particularly because of the rapid growth of the furniture industry in Quebec after World War II. This movement was intensified by the activities of sash and door factories and little wood-working shops in small villages expanding to make furniture to fill the pent-up demands of consumers.

Although Ontario furniture manufacturers have enjoyed tremendous growth since the end of the war, their share of total Canadian production has continued to decline. By 1957, Ontario's industry was producing less than 50 per cent of total produc-

tion, and in 1961 Ontario's share was 47.9 per cent. In that year, however, the value of furniture production in Ontario was \$174.3 million, and employment in the industry was 15,215 persons.

In 1963, the value of production in the furniture industry for all of Canada was over \$400 million, and employment was 31,500 persons. Since 1949, this represents an increase of 75 per cent in the value of production with an increase of only 17 per cent in the number of employed persons. These statistics tend to show that one of the last of the Canadian craft industries has yielded to the pressure of industrialization. In large part, this is due to the rising relative importance of metal furniture.

Despite rising imports, furniture manufacturers in Ontario will experience much growth in the demand for their products. A steady growth in population, accelerated levels of family-formation and increasing personal wealth assure market potential for an expanding furniture industry.

#### FURNITURE INDUSTRY IN ONTARIO 1957-1961 (Value of Factory Shipments)

	1957	1958	1959	1960	1961
	\$	\$	\$	\$	\$
Household Furniture	89,920,821	89,253,970	93,108,319	92,199,548	97,545,299
Office Furniture	18,014,846	15,641,405	18,991,141	19,184,864	18,105,010
Miscellaneous Furniture	40,467,637	42,115,291	44,125,594	48,005,481	53,158,825
Electric Lamp and Shades	5,099,034	5,575,707	5,968,869	5,422,407	5,449,218
<b>TOTAL VALUE OF FACTORY SHIPMENTS</b>	<b>153,502,338</b>	<b>152,586,373</b>	<b>162,193,922</b>	<b>164,812,300</b>	<b>174,258,352</b>
Less shipments not considered furniture*	25,327,884	24,261,233	26,113,221	36,258,706	37,639,804
<b>Total furniture production — Ontario</b>	<b>128,174,454</b>	<b>128,325,140</b>	<b>136,080,701</b>	<b>128,553,594</b>	<b>136,618,548</b>
<b>Total furniture production — Canada</b>	<b>256,717,016</b>	<b>259,752,441</b>	<b>276,677,776</b>	<b>271,543,258</b>	<b>285,432,894</b>
<b>Ontario as percent of Canada</b>	<b>49.9%</b>	<b>49.4%</b>	<b>49.2%</b>	<b>47.3%</b>	<b>47.9%</b>

Source: Figures are derived from Dominion Bureau of Statistics.

\*Shipments include radio cabinets, sewing machine cabinets, custom work furniture components, electric lamps and shades, pillows and other non-furniture products.

ONTARIO ECONOMIC INDICATORS - SEASONALLY ADJUSTED  
(\* Figures for Canada)

1964 ----- 1965 -----

LEADING INDICATORS

February March April May June July August September October November December January February March

Average Weekly Hours Worked in  
Manufacturing  
Business Failures - Number  
Business Failures - Liabilities  
New Orders in Manufacturing\*  
T.S.E. Index - 77 Stocks  
New Dwelling Unit Starts  
Housing Contracts  
Business, Industrial and Engineering  
Contracts  
Money Supply\*

(No.)  
\$ 000  
\$ Million  
1956=100  
(No.)  
\$ Million  
\$ Million  
\$ Million

COINCIDENTAL AND LAGGING INDICATORS

Gross National Product\*

Total Industrial Production\*  
Total Manufacturing  
Non-Durables  
Durables  
Mining  
Electric Power & Gas Utilities  
Cheques Cashied in Clearing  
Centres  
Retail Trade  
Labour Income  
Industrial Employment  
Average Hourly Earnings in  
Manufacturing  
Primary Energy Demand - OHPC  
New Dwelling Unit Completions

\$ Million  
1949=100  
\$ Million  
\$ Million  
\$ Million  
1949=100  
\$  
BKM  
(No.)

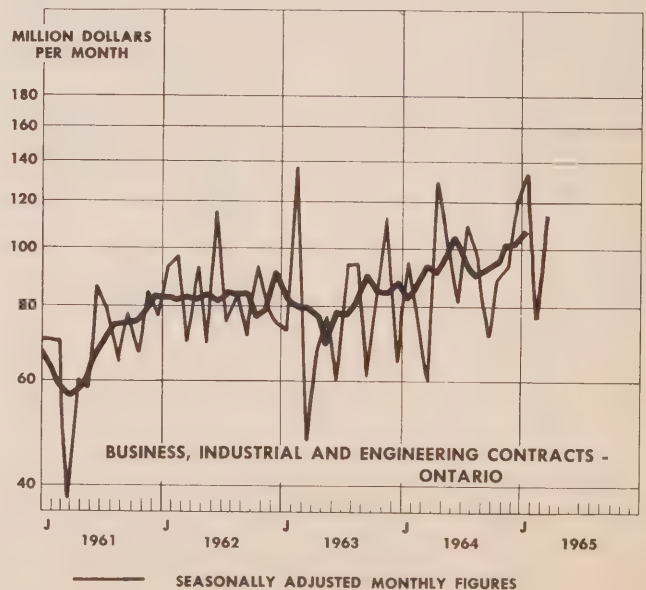
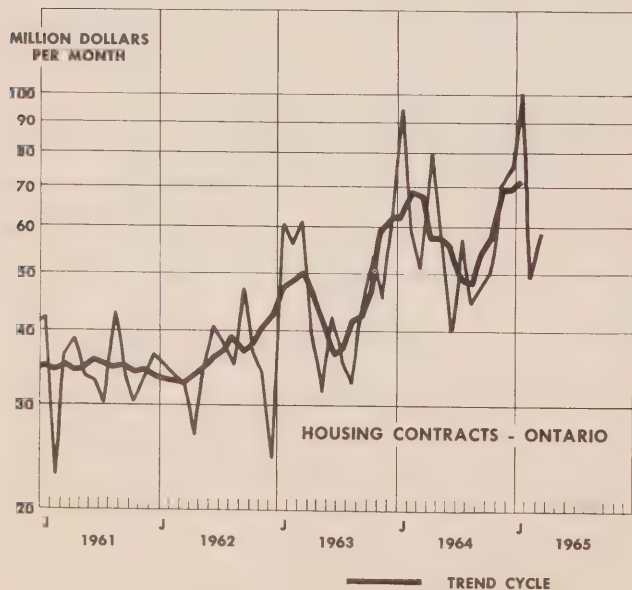
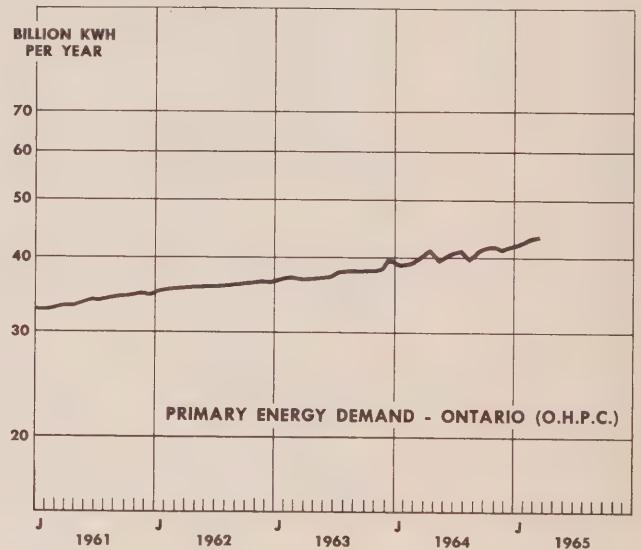
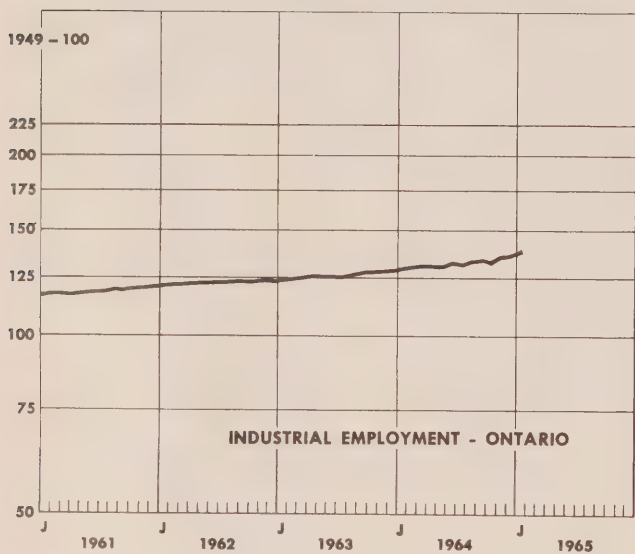
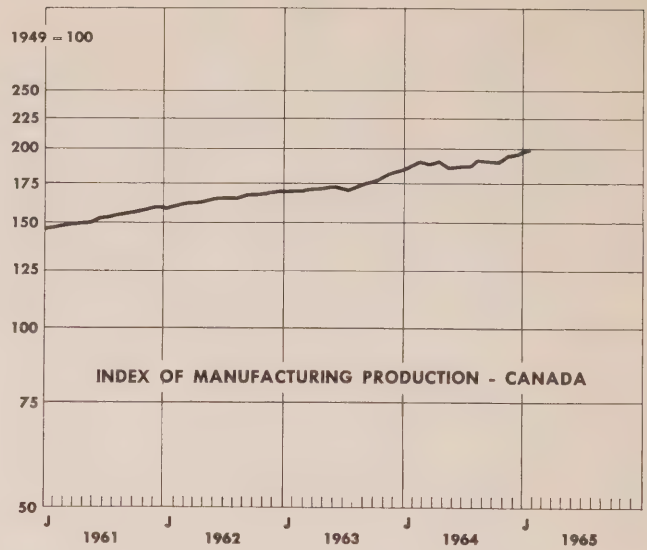
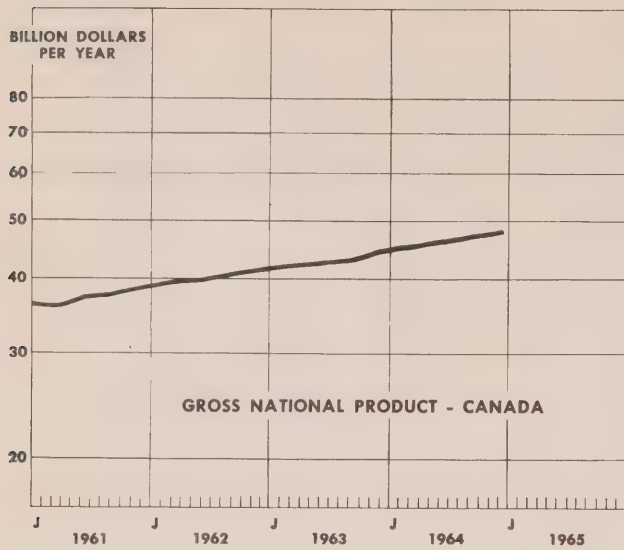
ECONOMIC INDICATORS NOT SEASONALLY ADJUSTED

Labour Force (1)  
Employed (1)  
Unemployed (1)  
Unemployed as % of Labour  
Force (1)  
Prices, Industrial Materials\*  
Domestic Exports\*  
Imports for Consumption\*  
Foreign Exchange Reserves\*

000's  
000's  
000's  
%  
1935-39=100  
\$ Million  
\$ Million  
\$ Million U.S.

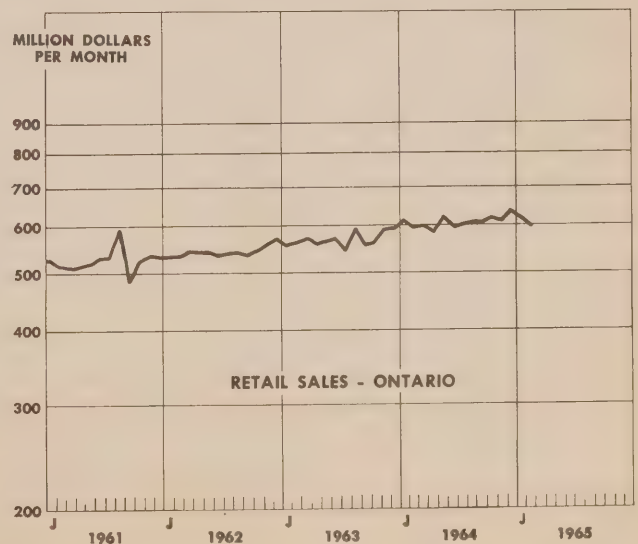
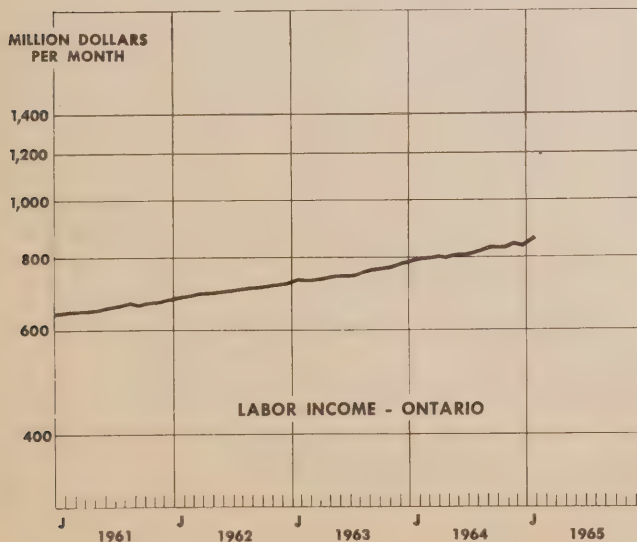
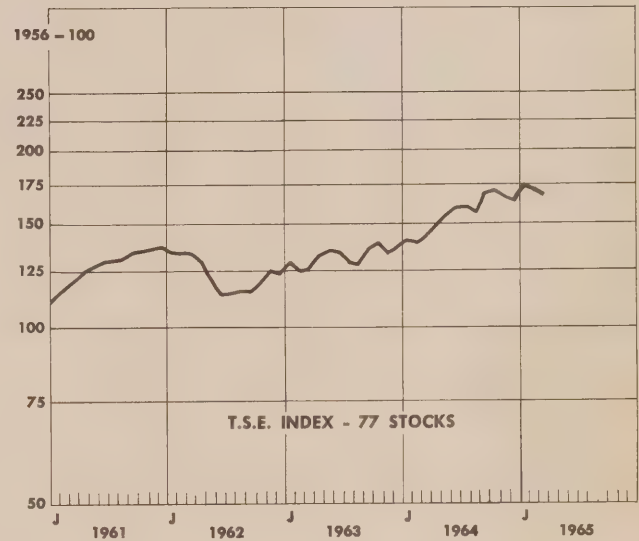
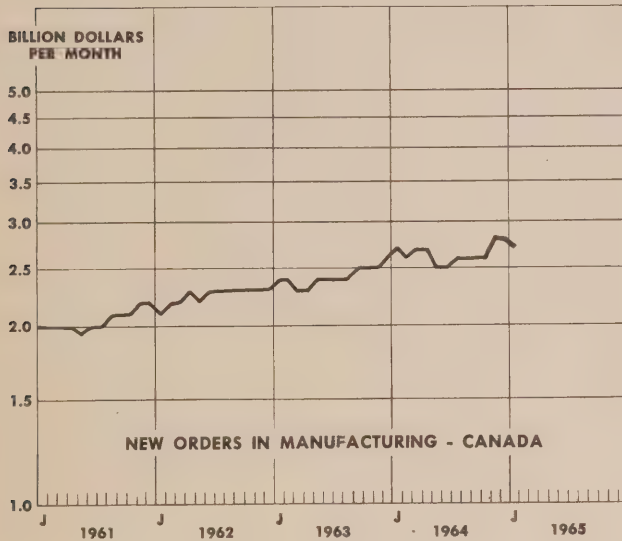
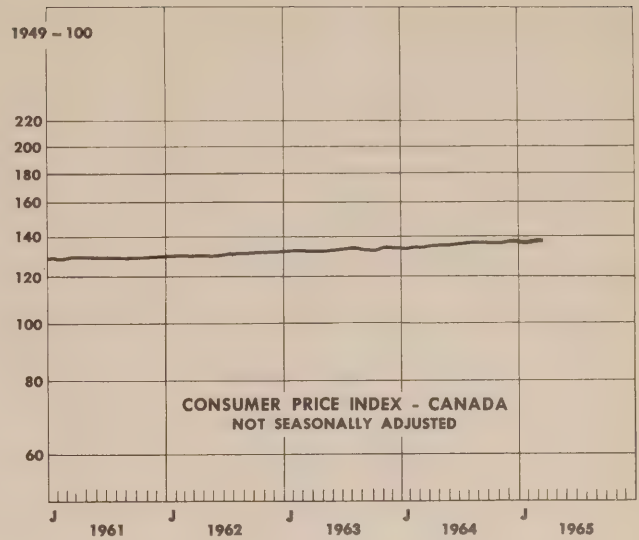
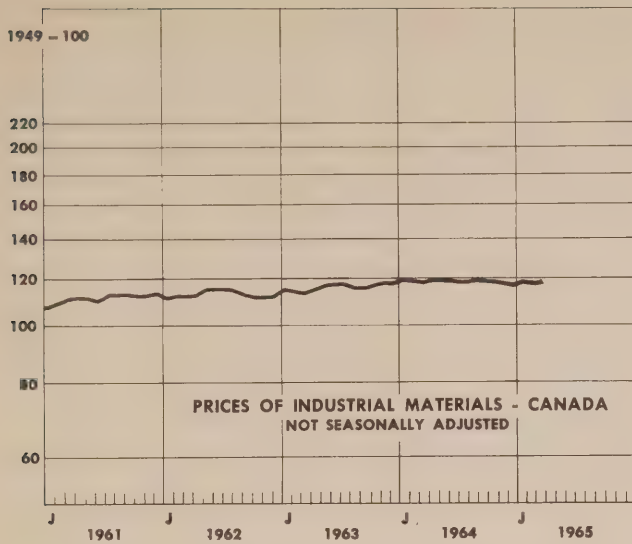
(1) For a few months, the labour reports will not be adjusted for seasonal variation as recent revisions in the statistics have not been completed in the seasonally adjusted series.

# ECONOMIC INDICATORS—SEASONALLY ADJUSTED





# ECONOMIC INDICATORS—SEASONALLY ADJUSTED













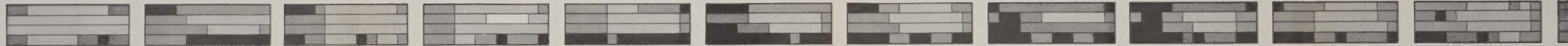
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# CLASSIFICATION OF LABOUR MARKET AREAS IN ONTARIO

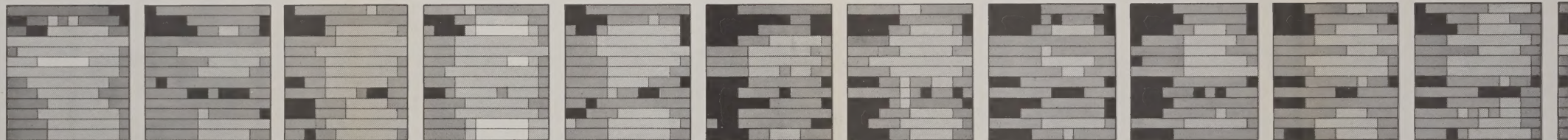
## METROPOLITAN AREAS (1)

HAMILTON  
OTTAWA  
TORONTO  
WINDSOR



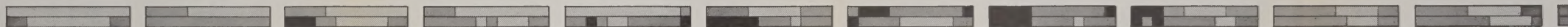
## MAJOR INDUSTRIAL AREAS (2)

BRANTFORD  
CORNWALL  
FORT WILLIAM - PORT ARTHUR  
GUELPH  
KINGSTON  
KITCHENER  
LONDON  
NIAGARA PENINSULA  
OSHAWA  
PETERBOROUGH  
SARNIA  
SUDBURY  
TIMMINS - KIRKLAND LAKE



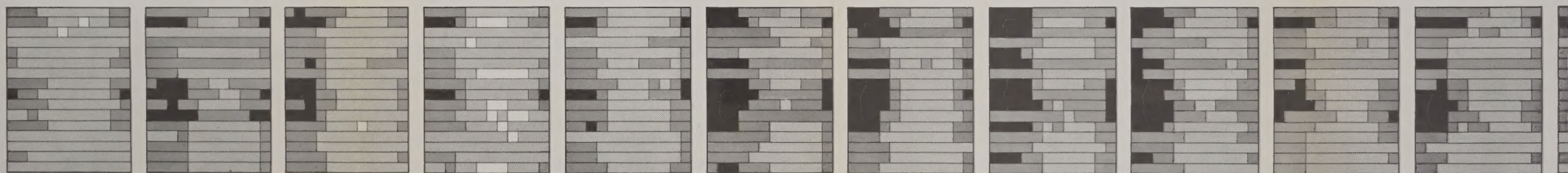
## MAJOR AGRICULTURAL AREAS (3)

BARRIE  
CHATHAM



## MINOR AREAS (4)

BELLEVILLE - TRENTON  
BRACEBRIDGE  
BRAMPTON  
GALT  
CODERICH  
LINDSAY  
LISTOWEL  
NORTH BAY  
OWEN SOUND  
PEMBROKE  
SAULT STE. MARIE  
SIMCOE  
ST. THOMAS  
STRATFORD  
WALKERTON  
WOODSTOCK - TILLSONBURG



J F M A M J J A S O N D 1953 J F M A M J J A S O N D 1954 J F M A M J J A S O N D 1955 J F M A M J J A S O N D 1956 J F M A M J J A S O N D 1957 J F M A M J J A S O N D 1958 J F M A M J J A S O N D 1959 J F M A M J J A S O N D 1960 J F M A M J J A S O N D 1961 J F M A M J J A S O N D 1962 J F M A M J J A S O N D 1963 J

■ Substantial Surplus ■ Moderate Surplus ■ Approximate Balance □ Labour Shortage

- (1) Labour force more than 75,000  
(2) Labour force 25,000-75,000 (60% or more in non-agricultural activity)  
(3) Labour force 25,000-75,000 (40% or more in agriculture)  
(4) Labour force 10,000-25,000

SOURCE: Labour Gazette





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